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Fertilization in the Future, Agronomic Advances Discussed at NPFI Convention

By LAWRENCE A. LONG
Editor of Croplife

WHITE SULPHUR SPRINGS, W.VA.—A preview of fertilization in the future, the role of plant food and weather in creating high-value crops, a talk on predicting fertilizer sales for the following year and election of 12 new members to its board of directors were features in the fourth annual convention of the National Plant Food Institute at the Greenbrier Hotel here June 14-17. About 1,000 persons representing the plant food industry throughout the U.S. and other countries were on hand for the meeting.

The convention, high point of the year for many in the industry, provided a firm note of optimism for the trade as speakers reported numerous advances in not only the agronomic side of the picture, but also in educational and marketing efforts being conducted by the Institute.

Richard E. Bennett, Farm Fertilizers, Inc., Omaha, Neb., NPFI president, reported on the year's progress of the Institute, declaring that its expanded program is developing exceptionally well with some 30% of the annual budget being allocated for research and education projects. "This money is being used principally as a catalyst to help speed up the reaction in fertilizer research and fertilizer promotion," he told the group.

The president reported also on the work being carried out in governmental affairs, in seeking more favorable freight rates for the industry, and in the promotion of

safety education throughout the country.

"Costs of non-participation are high, but benefits from participation are also high," he told the audience. "A real plus can be achieved by cutting high costs and reaping high benefits. The refund check to one company on premiums paid last year was almost 10 times the amount the Institute put in its safety effort in the same year." The president urged all members to take more interest in this program.

Public relations for the industry are on a good level, he said, but there are still many people who do not understand the purposes of the

industry and may associate plant food with farm surpluses. "Maybe all housewives don't yet know about the value in their market baskets put there by this industry," he noted. "We should always speak with a strong voice on the constructive side of the issue," he added.

Dr. Russell Coleman, executive vice president of NPFI, was moderator of a panel which discussed further the activities of the Institute. Three regional directors, and two agricultural economists participated in the discussions.

Dr. Richard B. Bahme, western regional director, told how fertilizer is being publicized throughout his area through fertilizer technology schools,

tours through agricultural regions and various conferences and symposia conducted in cooperation with colleges and universities. "We believe our prestige building program has developed an increased appreciation of the contribution being made to our high standard of living and national welfare by the fertilizer industry and fertilizer users," he said. "At the same time, we are selling the economic benefits of proper fertilization and high soil fertility. This

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J. D. Stewart New NPFI President; Chairman Elected

WHITE SULPHUR SPRINGS, W.VA.—The board of directors of the National Plant Food Institute elected J. D. Stewart, Jr., of Louisville, Ky., as president, and Richard E. Bennett, of Omaha, Neb., as chairman of the board, at the conclusion of its convention, June 14-17. Mr. Stewart is president of Federal Chemical Co., Louisville, Ky., and Mr. Bennett is president of Farm Fertilizers, Inc., of Omaha, Neb. Other officers, all of Washington, D.C., were re-elected as follows: Paul T. Truitt and Russell Coleman, executive vice presidents; W. Raoul Allstetter, vice president; Louis H. Wilson, secretary, and William S. Ritnour, treasurer.

Members of the executive committee elected are as follows:

Ralph B. Douglass, chairman of the board of Smith-Douglass Co., Inc., Norfolk, Va.; John W. Hall, vice president in charge of sales, Potash Company of America, Washington, D.C.; Stanley Learned, chairman of the executive committee and assistant to the president of Phillips Petroleum Co., Bartlesville, Okla.; Justin Potter, president, Virginia-Carolina Chemical Corp., Richmond, Va.; C. T. Prindeville, vice president, Swift & Co., Chicago, Ill.; W. E. Shelburne, president, Armour Agricultural Chemical Co., Atlanta, Ga.; Jacob White, president, Nitrogen Division, Allied Chemical Corp., New York, N.Y., and Mr. Bennett and Mr. Stewart.

L. N. Roberts, general manager, Ammonia Division, Shell Chemical Corp., San Francisco, Cal., was elected to the board of directors to fill the unexpired term of O. R. Monkhouse, whose term expires June 1961.

CONVENTION COVERAGE

Croplife's coverage of this year's National Plant Food Institute convention is being handled by Lawrence A. Long, Donald G. Neth and W. E. Lingren, of the Minneapolis office, and Amos Standish of the Chicago office.

Modern Formula for Predicting Year-Ahead Plant Food Use Given to Greenbrier Visitors

WHITE SULPHUR SPRINGS, W.VA.—A modern formula for predicting, a year in advance, plant food use in the U.S. was presented by Dr. R. A. King, professor of agricultural economics, North Carolina State College at the National Plant Food Institute convention here June 15.

On the basis of his calculations, he predicted that some 6,711,000 tons of primary plant nutrients will be used in the 1958-59 fiscal year in the U.S. Of this total, 1,393,000 tons will be consumed in the south Atlantic states

and 1,630,000 tons in the east north central states.

In pointing out the basis for such predictions, he said that when applied to the past 46 years, the formula produced results of 99.3% accuracy.

"The state college-developed method, applied to 1957-58, gave a predicted consumption of 6,462,000 tons compared with actual use of 6,358,000 tons," Dr. King stated, adding that

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Nutrition of High-Value Crops, Minimizing Risks with Plant Food Are Panel Topics

WHITE SULPHUR SPRINGS, W.VA.—A panel discussion on fertilization in the future, covering nutrition of high value crops and minimizing weather risks through the use of plant food, comprised one portion of the program at the National Plant Food Institute convention here June 15. W. R. Allstetter, NPFI vice president, was moderator of the symposium.

Dr. L. D. Baver, director, experiment station, Hawaiian Sugar Planters' Assn., told the assembly that the "production of sugar per acre per year is higher in Hawaii than in any other sugar-producing area," and "major factors in the high sugar yields have been the meshing together of the development of new varieties with the intelligent use of fertilizer."

"The present effective use of fertilizers has been based upon well-planned field experimentation, soil analy-

ses and plant analyses," he said. "There are rather close relationships between plant and soil compositions and fertilizer responses. It is extremely essential to understand both the soil and the plant in the scientific feeding of high-value crops."

Dr. Baver presented data that showed trends of fertilizer usage in the island and its relation to yields, pointing out that with average fertilizer applications (850 lb. actual plant food an acre). "Yields have risen to over five tons of sugar an acre per year (10 tons per crop)."

That "fertilizer the magician can truly work miracles as it changes the low value to the high value crop and makes money appear in the farmers' pockets," was pointed out by Dr. J. Fielding Reed, southern manager of the American Potash Institute. Speaking on the subject of "Converting Low Value Crops into High Value

Crops," he reminded that the greater part of the farming acreage in this country is devoted to low value crops which are greatly underfertilized.

"Fertilizer usage on these crops can often be profitably doubled and net returns can be increased enormously," he declared. He cited a number of illustrations to show how "low value" crops can be made profitable through the use of plant food. One instance was recalled where profits from an average acre of cotton in South Carolina were \$22. By adding adequate amounts of plant food, yields went up and net profit with it, bringing a net profit of \$283 an acre.

Citing the over-all cotton acreage of 17.5 million acres as an example, Dr. Reed said that the average profit an acre is \$10.17. "By switching to recommended practices, we can grow on 10½ million acres, a little less

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Larry E. Prince

SALES SUPERVISOR—Stauffer Chemical Co., New York, announces the promotion of Larry E. Prince to the position of agricultural chemicals sales supervisor for North and South Carolina, Alabama, Georgia, Tennessee and northern Florida. Mr. Prince is a graduate of the University of Georgia, and joined Stauffer in 1951.

Memorial Scholarship Started at Purdue

ARDSLEY, N.Y.—Dr. G. R. Ferguson, president of Geigy Agricultural Chemicals, announced the establishment of the C. C. Alexander Memorial Scholarship Fund at Purdue University.

Mr. Alexander, who died in an airplane accident on May 12, 1959, was research manager of Geigy Agricultural Chemicals. He was an alumnus of the Purdue entomology department, class of 1938.

The scholarship, initiated at the suggestion of many of Mr. Alexander's friends both within and outside the chemical industry, will be the first perpetual fund of its kind at Purdue which will give preference to entomology students.

Contributions may be made directly to the C. C. Alexander Memorial Scholarship Fund, Purdue Alumni Scholarship Foundation, Lafayette, Ind.

Dr. Ferguson said that Geigy has made a major contribution to the fund in recognition of Mr. Alexander's years of service to the company and for his contributions to the field of agriculture as well as to mark their high esteem for him as an individual.

Fertilizer Industry Asked To Contribute 4-H Funds

WASHINGTON—Members of the fertilizer industry will have an opportunity to assist the nationwide 4-H Club movement, according to R. E. Bennett, president of Farm Fertilizers, Inc., of Omaha, Neb., and Dean R. Gidney, vice president of the United States Potash Co. of New York.

Mr. Bennett and Mr. Gidney are co-chairmen of a special fund raising program which got underway June 1 in behalf of the National 4-H Club Foundation.

More than 2,200,000 boys and girls are now members of 4-H Clubs in 50 states and Puerto Rico. Crop and other agricultural 4-H projects this year will utilize more than a million acres of farm land.

In a letter to members of the fertilizer industry, Mr. Bennett and Mr. Gidney stated, "There is no better investment than in the youth of our country. The youth in whom we will be investing will be the farm leaders of tomorrow. These young people . . . learn by doing to use the latest scientific practices with the soil conservation and crop projects."

NEW NPFI BOARD MEMBERS

WHITE SULPHUR SPRINGS, W. VA.—Members of the National Plant Food Institute at the 4th annual convention here June 14-17, elected 12 new members to their board of directors for terms expiring in June, 1962. They are: B. H. Brewster, Jr., Baugh & Sons Co., Baltimore, Md.; J. C. Denton, Spencer Chemical Co., Kansas City, Mo.; James F. Doetsch, Chleian Nitrate Sales Corp., New York; Marlin G. Geiger, W. B. Grace & Co., New York; E. A. Geoghegan, Southern Cotton Oil Division, Wesson Oil & Snowdrift Co., Inc., New Orleans, La.; L. D. Hand, Pelham Phosphate Co., Pelham, Ga.; John W. Hall, Potash Company of America, Washington; E. B. Jones, The Hubbard-Hall Chemical Co., Waterbury, Conn.; G. H. Kingsbury, Kingsbury & Co., Inc., Indianapolis, Ind.; J. J. Lanter, Central Farmers Fertilizer Co., Chicago; C. T. Prindville, Swift & Co., Chicago, and Tom Wright, Texas Farm Products Co., Nacogdoches, Texas.

Fifteen-Year Test Reveals Fertilizer Increases Forage Production Three Times

SAN FRANCISCO—"Annual application of nitrogen-phosphate fertilizer will increase forage production by three times that of unfertilized rangeland," according to Oswald K. Hoglund, manager of the government-sponsored Pleasanton Plant Materials Center, Alameda County, California.

Mr. Hoglund was basing his observations and recommendations on results from fertilizer trials conducted over a 15-year period at Sunol, a site representative of about 1½ million acres of annual range in California.

"From these tests we noted that fertilization increased hay production by about 2,882 lb. each year. In other words, each pound of nitrogen when applied with phosphate produced over five extra pounds of beef," Mr. Hoglund said. "These yields were obtained from an annual application of 200 lb. of fertilizer per acre."

ed from an annual application of 200 lb. of fertilizer per acre."

Mr. Hoglund added that this rate of application advanced the date of grazing readiness by six weeks and doubled the length of the green feed period. "With an application of 1,000 lb. of fertilizer per acre, grass will mature up to 12 weeks earlier," he stated.

Other striking results of these fertilizer trials were the reduction of fluctuation in production of forage from year to year, and the improvement of "frost hardness" or the ability of plants to live and grow during the frosty winter months. Mr. Hoglund recommended fall fertilization with a nitrogen-phosphate fertilizer to reduce the amount of tip burning by frost. He said that fertilization also helped produce an adequate cover for control of erosion and for conservation of water.

The Pleasanton Plant Materials Center was established in 1939 for the purpose of improving agriculture by developing better plants and cultural practices. It is supported, on a matching fund basis, by the USDA and the state of California. The improvement and conservation of annual range lands have constituted a major part of its program. The center was one of the pioneers in the use of nitrogen-bearing fertilizers on annual rangeland.

Application, Engineer Meeting Set for Cornell

ITHACA, N.Y.—The 35th annual meeting of the National Joint Committee on Fertilizer Application in cooperation with the power and machinery division of the American Society of Agricultural Engineers has been set for Cornell University here, June 23.

W. C. Hulburt, U.S. Department of Agriculture, vice chairman of the committee, will preside.

Included in the morning program are sections on: "Safe and Efficient Fertilizer Placement," W. L. Nelson, American Potash Institute, West Lafayette, Ind.; "Fertilizer Placement for Small Grains," C. M. Hanson, L. S. Robertson and R. F. Dudley, agricultural engineering department, soil science department, Michigan State University, and USDA, Beltsville, Md., respectively; "Deep Tillage and Fertilizer Placement, in Michigan," Mr. Hansen, Mr. Robertson and H. D. Foth, also of Michigan State, and in Georgia—C. E. Rice, agricultural engineering department, University of Georgia.

For the afternoon, a field trip to view fertilizer placement demonstrations and equipment has been planned.

Pacific Coast Borax Adds Sales Representative

LOS ANGELES—The Pacific Coast Borax Co., division of U.S. Borax and Chemical Corp. has announced the appointment of D. R. Donovan to its agricultural sales department.

Mr. Donovan's headquarters will be in Pittsburgh, Pa. He will cover the northeastern states area for the company, handling sales of borate herbicides for agricultural and industrial use, and sodium calcium borate fire-retardant compounds.

Mr. Donovan was formerly associated with the Chain Link Fence Division of U.S. Steel Corp. and is a native of Flint, Mich. He is a graduate of Washington and Jefferson College and the University of Pittsburgh.

Frontier Chemical Plans New Research Facility

WICHITA, KANSAS—The Frontier Chemical Co. has signed contracts for construction of a new research and development building to be located near the firm's chemical plant about eight miles from Wichita, Wesley H. Sowers, president, announced.

The building will contain about 10,000 sq. ft. of floor space. It will house chemical research laboratories, a pilot plant area and office space for personnel of a new Frontier research and development department.

Research facilities will provide working space for 20 chemists and chemical engineers. Sowers said experimental work will be directed toward development of new products to be manufactured by the company.

The pilot plant area will provide a space for chemical engineers to build and operate miniature test chemical plants. Information from these pilot plants will be used in the design and construction of full scale chemical plants.

Bruce D. Gleissner, Frontier vice president and technical director, has overall responsibility for the research program. E. M. DeForest, Frontier manager of research and development, will be in charge of research activities after the building is completed.

Frontier is a division of Vulcan Materials Co.

Northeast Weed Group Plans Annual Meeting

WASHINGTON—The 14th annual meeting of the Northeastern Weed Control Conference will be held on Jan. 6-8, 1960, at the Hotel New Yorker, New York City. The executive committee of the conference recently met in New York to plan the meeting.

As in previous years, the program for the three day meeting will open with a general session on topics of general interest in weed control, followed by concurrent meetings for five sections: agronomic crops; aquatics, conservation and forestry; horticultural crops; industrial and highways, and public health. Leading authorities will present results of research in weed control in the various section meetings.

Members of the 1960 executive committee are: president, Dr. L. G. Utter, Diamond Alkali Co.; vice president, Dr. E. M. Rahn, University of Delaware; secretary-treasurer, Dr. D. A. Schallack, Rutgers University, and program chairman, Dr. W. E. Chappell, Virginia Polytechnic Institute.



30-YEAR PIN—Frederick Koechlein (left), general manager of the phosphate division of International Minerals & Chemical Corp., receives 30 year employment pin from George Moyers, division vice president, at ceremony in IMC's Skokie, Ill., headquarters. Mr. Koechlein, a graduate of Rutgers University, joined IMC as assistant production manager of the division May 1, 1929. He has been general manager since 1951.

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INSECT, PLANT DISEASE NOTES

Pink Bollworm Advances On California Cotton Area

SACRAMENTO—The advance of the dreaded pink bollworm of cotton toward California's fertile cotton-growing areas in Imperial and Riverside counties is being viewed with alarm by the California Department of Agriculture and growers throughout the state.

In addition to operating gin trash machines provided by the U.S. Department of Agriculture, 120 argon light traps will be located in the state this year. Seventy-five of the traps are now in operation in the desert areas nearest the Arizona infestation which is described as its largest and worst.

In addition, field inspections, involving careful scrutiny of blossoms and green bolls, are made during the growing season. Lint cleaners at cotton gins are inspected regularly for the presence of the pests.

Detection and survey work is augmented by enforcement of strict state plant quarantines. Plant quarantine inspectors of the State Department of Agriculture are thoroughly informed and alerted about the dangers of pink bollworm and the cotton boll weevil and intercept all cotton pest host material which might carry either one. Cotton picking machines are subjected to fumigation and thorough inspection.

Entomologists Predict Fewer Leafhoppers for Utah

OGDEN, UTAH—The leafhoppers which ravaged the local tomato plants, transmitting the virus which causes curly top disease, will move into cultivated areas this year in fewer numbers, according to word from the entomology research division at the Utah State University here.

"Beetoppers collected from various annual host plants in the southern breeding grounds in mid-February, 1959," the report said, "showed about 3% to be viruliferous or capable of transmitting the virus that causes curly top disease.

"This compares with 7% in 1958, 6% in 1957, 10% in 1956, 20% in 1955 and 10% in 1952."



Green Bug Outbreak Termed Serious in South Dakota

BROOKINGS, S.D.—In areas in eastern South Dakota, serious outbreaks of green bugs are damaging small grains, according to William Hantsbarger, entomologist for the S.D. State College agricultural extension service.

Some fields have been completely destroyed and farmers are plowing under the fields, he reported.

The development of green bugs in the state is due to weather conditions. Cooler temperatures are beneficial to rapid build up of this aphid and a slowdown of development of its natural predators. Winged aphids are brought in from states to the south by winds and establish themselves on small grains.

Advent of warmer weather with temperatures over 65° will help in keeping the infestations in check. Natural predators such as ladybird beetle are quite effective at warmer temperatures.

Wyoming Aerial War On 'Hoppers to Start Soon

CHEYENNE, WYO.—Aerial war on 460,000 acres infested with grasshoppers is expected to get under way July 1, reported Everett W. Spackman, state entomologist.

Surveys conducted last July and

August indicated there will be 955,000 acres of hopper infested rangeland in Wyoming this year, he stated.

However, it is anticipated the 1959 cooperative control program will cover about 460,000 acres. He explained that in some areas the infestation may not develop as believed, and in other areas landowners are not interested in signing up for a cooperative program. A 100% sign-up is required for an area control program.

Last year's aerial spraying program covered 283,666 acres at an average cost of 51¢ an acre. The state's share amounted to little more than \$48,000. The 35th Legislature appropriated \$130,000 to finance the state's share of grasshopper control programs for the next two years.

Spotted Alfalfa Aphids Fail to Make Idaho Showing

MOSCOW, IDAHO—Spotted alfalfa aphid, growing scourge of southern states, has not shown up in Idaho this spring, according to a statement issued here by Roland Portman, entomologist for the University of Idaho agricultural extension service.

Mr. Portman's survey includes southern counties of the state where the aphid showed up in 1955 and the Lewiston area where infestations were discovered in 1958. Oregon and Washington surveys have likewise failed to find the insect this spring.

"The outlook is very favorable," Mr. Portman says. "More than ever, we believe the spotted alfalfa aphid is unable to survive our Idaho winter conditions. The likelihood of its becoming a real problem is considerably diminished. The fact that both Oregon and Washington are free of the pest is in our favor since the aphid travels with the wind, and prevailing winds are from those states to us."

Mr. Portman points out that it is possible for winterhardy strains of the insect to develop and eventually invade the northern states in spite of winter rigors.

"We are not afraid of this at any near date," he declares, "but there is that possibility. For this reason, we are in hopes that farmers throughout

the state will acquaint themselves with the description of the aphid and report it or any other strange insect as soon as it shows up in their areas. Such a program will do much to head off hard-to-control infestations."

Grasshopper Numbers Variable in Kansas

MANHATTAN, KANSAS—Numbers of grasshoppers are very variable this year, in Kansas and a few winged migratory grasshoppers were found in southern counties.

Development of chinch bugs has been slow. Many sorghum fields have the adult chinch bugs along the small grain sorghum border and would benefit from a border spray.

Egg hatch for the first generation corn borer is nearly completed. Fields examined in Shawnee County averaged less than 50% of the plants infested. There are also some corn earworms and fall armyworms present in some fields.

Thrip damage to small emerging sorghum plants has been found in Sumner, Reno and Stafford counties. The thrips are inside the rolled leaves.

Damage to corn as tall as 36 in. by cutworms has been found in Shawnee County.

Common stalk borers were found in wheat, corn and oat plants in several fields in eastern Kansas. They were also numerous in brome grass, wheat and corn plants in Shawnee County. Damage to tomatoes has also been reported.

At least two-thirds of the state's cattle herds observed were bunched and fighting stable flies during the middle of the day.

Increasing reports of spider mites on gray or brown evergreens were heard.—Leroy Peters, Dell E. Gates.



Rain, Grass and Insects Bother Mid-South Farmers

MEMPHIS, TENN.—Excessive rain, grass, and insects have been the main concern of farmers in the mid-south states of Arkansas, Mississippi, Missouri, and Tennessee for the past several weeks. In many areas cotton and corn crops have been damaged extensively by rains.

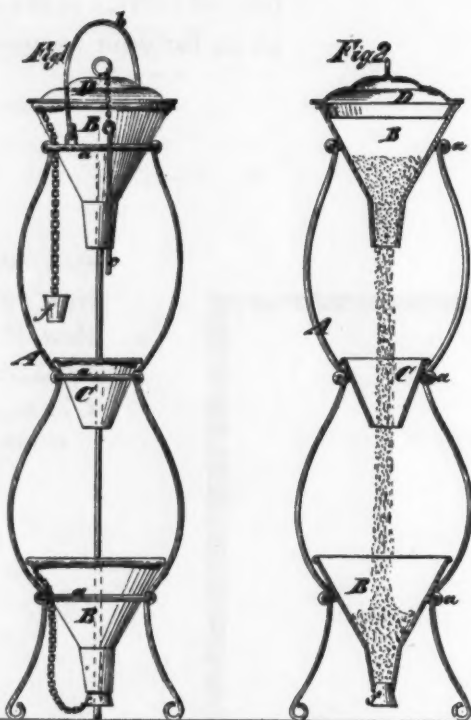
County agents in Mississippi counties reported cotton spotty with some fields being abandoned because of excessive grass. Chopping of cotton is slow, and there is a shortage of choppers in some areas. Boll weevil infestations are heavy in the older hill cotton but light in the Delta area, extension officials report.

Very little poisoning has been done. Several agents reported cotton is somewhat ragged due to seed coming up over a three-week period. Insects were reported active, with thrips in younger cotton and plant bugs and boll weevils in older cotton. Farmers who used pre-emergence chemicals on cotton were reported in better shape than farmers who did not, but crabgrass was reported getting out of hand in middles of some of the pre-emerged fields.

One of the main concerns of Arkansas farmers was getting enough fair weather so they could enter fields for cotton chopping and plowing. Extension officials reported boll weevil populations as being very light in all sections of the state, with only a few weevils being found in the hotspot areas of the state. Bollworm eggs were reported very heavy on cotton, and in some instances as many as 18 bollworm eggs per 100 terminals have been found.

H. W. Luck, extension agronomist at Jackson, Tenn., reported some cotton in the western area of the state is grassy and that rains have washed land badly and flooded crops for a short time in creek bottoms. Cotton is just beginning to grow and "come out from under" insect damage which was severe earlier.

Saga of Insect Pest Control



—The illustration of the "Insect-Destroying Powder Dispenser" is the one used by the inventor in securing Patent No. 134,468 in 1872.

AN ODOR claimed to be "so noxious to all insects as to exterminate them but perfectly harmless to human beings" was the pest control principle of an hour-glass-like device patented in 1872 by one Hirsch S. Danziger of New York.

The apparatus, pictured above, was described in the patent papers as having "two or more interchangeable funnel-like receptacles, and one or more intermediate guide-funnels whereby powder which is noxious to insects but innocuous to human beings may be showered alternately from one receptacle to the other, and the air be thereby so impregnated with the odors of the powder as to exterminate insects without losing the powder nor distributing it about."

The top and bottom receptacles (B) in the drawings are identical. Toxic powder in the top container is allowed to drop to the bottom one via guide funnel (C). When the bottom one is full, it is exchanged with the top one, the plug at the bottom is pulled, and the process starts all over again.

The patent suggests that the toxic powder should be used with sand. The lid (D) has attached to it a stick, or poker (c) "with which the powder in the receptacle may be stirred up should it clog in the neck" of the top funnel.

No mention is made as to the composition of the "noxious" powder the fumes of which kill insects but are "innocuous" to human beings. Nor does the invention calculate the man-hours required to keep an operator juggling the receptacles to keep the powdery stream moving.

Alfalfa Weevil Buildup Continues in Colorado

FT. COLLINS, COLO.—The alfalfa weevil build-up in untreated fields is continuing, the Colorado Insect Detection Committee has reported. Larimer County has recorded highest numbers at 2,000 per 100 sweeps. The weevil is also present in both Morgan and Montrose counties, but in relatively low numbers.

Also building up is the pea aphid population on Larimer County alfalfa fields, with 2,500 per 100 sweeps recorded. The infestation appears relatively high also in Morgan County at 1,000 per 100 sweeps, but low in Mesa County.

The committee noted, however, that the spotted alfalfa aphid has not been found in the Fruita, Loma, Mack and Clifton areas of Mesa County. Usually this insect has appeared there by this time of the year.

In both Larimer and Morgan counties, some build-up of lygus bug populations has been noted in alfalfa fields. Lygus bug infestation appears to be static in Mesa and Montrose counties, however.

On Mesa County peach orchards, lygus bug populations are low. This points to the possibility that there will be less damage to peaches this year from "cat-fishing," a term used to describe malformation of fruit caused by this insect.

The green peach aphid has completed its migration to summer host plants in Mesa County. Damage to peach trees is rated moderate to heavy. The committee also notes that the black cherry aphid has been a problem in some Delta County orchards. Control measures have been only poor to fair.

In the foothills area of northern Colorado, the tent caterpillar has appeared in large numbers. Larimer County reports infestations on ornamental plantings.

Recent high temperatures apparently have helped reduce numbers of potato psyllid found on matrimony vine in Larimer County.



Yellow Dwarf Disease Found in Southwest Iowa After 10-Year Absence

AMES, IOWA—Yellow dwarf, a disease that has not appeared in Iowa for more than 10 years is threatening a great many oats fields in southwest Iowa this spring.

A quick check of oats seedlings in East and West Pottawattamie counties reveals that nearly all fields show some evidence of the presence of the disease.

At the moment damage varies from slight to almost total.

County extension directors say that they have received very few comments on the problem. They point out however that oats do not normally constitute a major crop in this area and thus concern on the part of the farmers may not have developed.

Plant pathologists at Iowa State College say that while the disease is destructive to the oats plants it does not affect legumes which might be seeded with the oats.

The virus, which causes the Yellow Dwarf attacks, overwinters in roadside grasses or along fence rows and in pastures. Aphids, feeding on these infected grasses, pick up the virus and transmit it to healthy oats plants.

Barley is also subject to the disease. At the present there is no recommended treatment for the infected fields.

CONVENTION

(Continued from page 1)

has been both satisfying and rewarding," he concluded.

Zenas H. Beers, midwest regional director, described some of the problems connected with raising the sights of farmers in their concept of fertilizer usage. In the midwest, he said, "substantial fertilizer use is a relatively new development. Modern agricultural technology plus a changed price relationship between fertilizer and farm products have created a situation under which heavy fertilization can be tremendously profitable to most farmers.

"The great majority of Corn Belt farmers know something about fertilizer and, in fact, apply some to their soils. They are not, however, using fertilizer at most profitable rates on their crops. On most crops

only a small fraction of the most profitable rate is applied. We are convinced that most Corn Belt farmers (1) do not know the productive capacity of their soil or (2) do not have confidence in their ability to achieve the productive capacity of their soils."

Consequently the NFFI has worked with the land-grant colleges to prepare, publish and publicize data as to the productive capacity of mid-western soils. As the standard of measure we have sought to determine those levels of production of each soil type which can be reached by nine out of ten farmers.

Mr. Beers said the keynote of NFFI's fertilizer sales expansion ef-

forts in the mid-west can be stated as follows: "Raise your customer's sights. Show him what he can do and how much more profitably he can farm on his particular piece of ground."

Mr. Beers told the group that before farmers will be convinced that they can reach the production capacity of their soils with fertilizer, "we must first convince fertilizer dealers and salesmen. Studies have shown that the attitudes of dealers and salesmen vary widely in the same territory. One man will believe that the fertilizer market is 90% saturated while his more successful competitor estimates the same market as 20% saturated. Awareness of opportunity and conviction that it can be reached are the first steps in profit planning for the fertilizer salesman, the dealer, and the fertilizer customer."

In a talk utilizing a screen presentation featuring the recorded voices of agricultural authorities in various

ONE INSECTICIDE-

Phosdrin[®]

INSECTICIDE

GETS 'EM ALL!

**Sure protection from seedling
up to one day before harvest
on many crops!**

IT PAYS TO SELL PHOSDRIN

A winner is always a profit maker. And now Phosdrin insecticide is fast becoming a winner in all growing areas. Phosdrin gives growers sure protection from seedling to harvest. On many crops, Phosdrin can be applied up to one day before harvest.

Phosdrin is the ideal insecticide for use close to harvest. Once applied, it gives fast, high kill, then disappears.

Phosdrin insecticide can be formulated in dusts and emulsible concentrates; you can sell Phosdrin in all popular formulations.

Phosdrin advertisements will appear in national and regional magazines and local newspapers. They will carry a timely message right to the heart of your markets—to pre-sell your customers.

This season sell a winner—a profit maker. Sell, display and recommend Phosdrin insecticide. Write for latest technical information on Phosdrin and its many applications.

PHOSDRIN CONTROLS—

Aphids Bean Aphid Cabbage aphid Cabbage loopers Corn Earworm Corn leaf aphid Cutworms (climbing) False Chinch Bug	Grape leaf folder Grasshoppers Green Peach Aphid Imported Cabbage Worms Leafhopper Leafminer, Dipterous (adult) Lygus Bugs Melon Aphid	Mites Pea Aphid Red-Banded Leaf Roller Salt-Marsh Caterpillar Strawberry Leaf Roller Thrips White fly
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Croplife Want Ads...
Get Results

SHELL CHEMICAL CORPORATION

AGRICULTURAL CHEMICALS DIVISION 460 Park Avenue, New York 22, New York

sections, Dr. Samuel L. Tisdale, southeastern regional director, described the intensified approach to the fertilizer market. He lauded the effectiveness of community organization; acquainting the people of a county with the economic potential to be gained through more efficient crop production. He said the plan has worked well in a number of areas. Local businessmen, farmers and agricultural leaders join in such a program, encourage farmers to have their soil tested, and the results have proved highly satisfactory in Georgia, North Carolina, South Carolina, Tennessee and Alabama, the oldest fertilizer-using area of the U.S.

He told of the impact of these programs both on farm income and fertilizer sales. In Colquitt County, Georgia, he said, farm income from only five crops was up over \$3 million in 1958 and 1957. In Hoke County, North Carolina, farm income increased by \$1.75 million, even though the acreage of cotton, the most important cash crop in the county, was significantly lower than in the previous year.

Fertilizer tonnages increased accordingly, he reported. In the six-county area in Georgia where the program was initiated, the tonnage of fertilizer was up 10.1%, for plant nutrients, 17.5%, and of lime, over 300%. In Hoke County, North Carolina, the tonnage of mixed goods was up 14.7% over the previous year.

"Are these soil fertility programs being expanded into other areas? Most definitely. And while the county soil fertility projects are conceived and carried out entirely by the local people, the Institute has lent, is now lending, and will continue to lend as much support to these undertakings as our resources will permit. Such programs are now underway in over 69 counties in seven southeastern states with more coming up," Dr. Tisdale said.

Tuesday morning's sessions featured the new movie, "Cash In On Grass" put out by the Institute, a talk on farm developments and another discussing the farm program.

Earl F. Crouse, president, Farm Business Council, Inc., Urbana, Ill., predicted that "net farm income in 1959 will be only slightly less favorable than in 1958," and "total farm income will be close to the favorable levels of the past year, but costs will be higher."

"No farm recession is in sight for 1960," he said, but added that livestock and poultry producers will be hurting relative to crop producers.

"Farming is in the middle of a metamorphic change so great and so far-reaching that men with finite vision can only guess at the long range future," Mr. Crouse said.

"The farmer of today is a businessman of very substantial means. It is not unusual at all for the farm operation to cover total financial resources of \$250,000 and more. In Champaign County, for example, I have, during recent weeks, talked with several farmers who are operating more than 500 acres of land. This year that land will sell for about \$700 an acre and the real estate investment alone represents \$350,000. It may not be all owned by one man, but it is operated by one manager. To that will be added an investment of \$30,000 to \$50,000 in machinery and equipment.

"If there is a livestock operation involved, the total investment goes on up from there. It is most important that we clearly understand that the farmer is a businessman and that he makes decisions like a businessman."

Mr. Crouse said that "wherever possible farmers are buying their labor on a piece work basis," adding that "the fertilizer manufacturer and the fertilizer dealer who best succeeds in reducing the on-farm labor costs of using fertilizer has an inside track to the market."

"The modern farmer is forced to consider fertilizer costs in terms of

plant food in the ground," he said. "This includes the material and the labor of application."

Referring to "our government farm programs and the 10 billion dollar carry-over of farm commodities owned, more or less outright, by the government," Mr. Crouse said:

"I have no doubt but that farm programs will be modified as city congressmen gain more and more control over legislation. The subsidies to agriculture have been part of the cost of transforming agriculture from an earth-bound, horse-powered economy to a developing agribusiness economy of automation, machine power and chemical fertilizers. With the transition behind us, it seems to me that the need for some of our farm programs may be passing.

"However, there remains the major public-policy decision of how to properly finance food reserves for 180,000,000 Americans. As big as our government stocks appear to the casual observer, I do not

think they are large by realistic standards of adequacy.

"The cost of food and fiber is going to be paid, if not by those who use such products, then by the land itself. Farmers either must make costs plus a living, or deplete the land to the injury of the nation, 'go broke' and move to town like the rest of us," Rep. Jamie L. Whitten (D., Miss.), chairman of the House Appropriations Subcommittee for Agriculture, told the convention. Speaking on "What's Needed in the Farm Program," the congressman said, "We must have a farm program which makes it possible for the farmer to get his fair share of the national income in the market place. I'm sure that farmers would prefer to accomplish this objective in a free market without governmental interference and without dependence upon the federal treasury.

"However, agriculture simply could not survive under the law of supply and demand alone so long as supply and demand is not applied

equally to the other segments of the economy. When the economic rights and practices of labor and industry are protected by federal law, and those of agriculture are not, the economic gains of labor and industry are accomplished largely at the expense of agriculture. In the end the whole economy suffers. Farmers must have adequate price protection if a suitable balance is to be maintained among agriculture, labor and industry.

"I feel certain there is no complete and perfect answer to our farm problem so long as we have laws for labor and industry which directly affect agriculture and agricultural costs of operation. It is my firm conviction that we must amend the present law providing for acreage limitations, correct present faulty administration, and provide the kind of price protection that will permit the farmer to get his fair share of the national income.

"When farmers cannot get enough in the market place to make a fair

"Great, Bill...this SPM

...it took Bill just 15 minutes to review the Sul-Po-Mag program and magnesium story.

Alf Oines (right), and Bob Freske (center), president and vice-president of the Michiana Chemical Co., of Niles, Michigan, will continue to profit from the SPM program. They're shown here with Bill Lane, IMC Potash sales representative.



3. "Bill, you may recall that we recently used various elements of your program . . . mailers, envelope stuffers . . . and found them very helpful in pushing our own brand. And we may want to take advantage of your imprinting service on some of the other materials."



4. "Here are examples of our Sul-Po-Mag editorial ads that are being run in farm publications this year. Each ad creates awareness of a need for magnesium . . . tells farmers the name of the product that corrects or prevents it . . . and displays the seal as the sign of Sul-Po-Mag."

Ask your IMC potash representative how the Sul-Po-Mag seal program can help boost your fertilizer sales

From its start several years ago, International's Sul-Po-Mag sales program has rapidly gained momentum. Sul-Po-Mag is well accepted as the ingredient in your mixed fertilizers to prevent and help correct magnesium deficiencies.

The SPM program is supported by full-scale national and local informational and product advertising. Ads written for specific crops are directed to growers throughout the nation. Growers of tobacco, potatoes, fruits and vegetables are all receiving SPM information. These magazine ads are backed up by radio commercials, direct mail, and publicity. Also, a large amount of work is being done to promote magnesium through influence groups such as county agents, vo-ag teachers and agricultural extension people.

The net effect . . . growers and influence groups are becoming more acquainted with the growing problem of magnesium deficiency. Sul-Po-Mag is widely recognized as the best way to combat magnesium shortages. As a result more and more growers are looking for the SPM seal on the mixed fertilizers they buy.

Fertilizer manufacturers using Sul-Po-Mag can take advantage of this promotion by identifying themselves and their products with newspaper ad mats, tags, seal imprints, imprinted direct mail pieces and posters . . . all available at no cost. For full information on the SPM program—and for information on IMC's full line of potash products—contact your International representative or write c/o the address at right.

living, they're forced to take it out on the land—to deplete our most important natural resource. We let the land pay the price for years, but the nation can no longer afford such a course. It is not only the farmer that gets hurt, but the nation as a whole. It means that we would be maintaining our standard of living by exhausting our capital assets.

"We must find some means to stop risking 50 to 100% of the value of our land every time we plant a crop. We must find a way to keep the farmer from having to absorb most of the middleman's increasing costs. The farmer simply cannot take less and less for his products while the costs of operating his farming unit continue to increase.

"We cannot blame the middleman, the processor nor the farm suppliers, like the fertilizer industry. They, too, must make a profit to stay in business. And improved efficiency can, at

best, absorb only a part of their increasing costs. The remainder must be passed along to their customers in higher prices.

"We must all stop, look and think about how to keep a balance for agriculture with industry and labor if we are to avoid pulling the house down on all of us. Our whole economic society is supported by these three pillars. If one of them collapses, the whole structure will be wrecked. This would prove to be ruinous, not only for agriculture, but in the long run, for the whole nation."

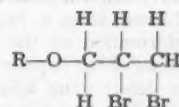
Two hospitality hours were provided by the nitrogen suppliers and potash firms on Monday and Tuesday evenings, with the annual banquet being held Tuesday night to mark the end of the general sessions of the convention.

Golf, tennis, and other recreational activities attracted many participants as near-perfect weather conditions prevailed at this West Virginia mountain resort.

PATENTS and TRADEMARKS

2,889,244

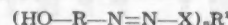
Method and Composition for Improving the Plant Growing Properties of Soil. Patent issued June 2, 1959, to Charles R. Youngson, Long Beach, Cal., assignor to the Dow Chemical Co., Midland, Mich. A method of treating nematode infested soil to control soil-dwelling organisms and to improve its plant growing properties which comprises introducing into said soil a nematocidal concentration of an active agent effective to improve said properties, the active agent being an ether compound having the formula



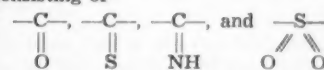
wherein R represents a member of the group consisting of lower alkyl, allyl and propargyl.

2,889,245

Method of Disinfecting Seed Grain by Applying a Composition Comprising an Hydroxyl Aromatic Diazo Derivative. Patent issued June 2, 1959, to Wilhelm Bonrath, Leverkusen-Bayerwerk, and Ewald Urbschat, Köln-Mulheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany. The process of controlling fungi infestation of seed grain, which comprises applying to the seed grain a fungicidal composition containing as an active ingredient an azo compound having the following general formula



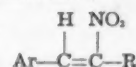
in which R is a member selected from the group consisting of mono-, di- and tri-nuclear aromatic radicals, R' is a radical selected from the group consisting of hydrogen, monocyclic aromatic, naphthyl, alkyl, substituted alkyl, alkenyl, substituted alkenyl, O-alkyl, O-aryl and carboxyl radicals, X is a radical selected from the group consisting of



and n is an integer from 1 to 2, both inclusive.

2,889,246

Method of Repelling Rodents by Treating with a Composition Comprising Anaryl Nitroolefin. Patent issued June 2, 1959, to Robert J. Harter, Terre Haute, Ind., assignor to Commercial Solvents Corp., Terre Haute, Ind. A process for protecting, against rodents, articles exposed to attack by rodents which comprises effectively surrounding said articles with, as a repellent barrier, a composition containing at least 0.5% of a nitroolefin having the following structural formula:



wherein Ar is a radical selected from the group consisting of phenyl, chlorophenyl, hydroxyphenyl, tolyl and 2-furyl; and R is selected from the group consisting of hydrogen, methyl, ethyl, propyl and bromine, Ar being phenyl only when R is ethyl or propyl.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of \$25 must accompany each notice of opposition.

Quick, Henry, the Flit, in capital letters, for insecticides. Filed Jan. 9, 1958, by Esso Standard Oil Co., New York. First use at least as early as 1930.

Propazin, in capital letters, for herbicides. Filed June 14, 1957, by Geigy Chemical Corp., Ardsley, N.Y. First use May 21, 1957.

Simatin, in capital letters, for herbicides. Filed July 24, 1957, by Geigy Chemical Corp., Ardsley, N.Y. First use July 5, 1957.

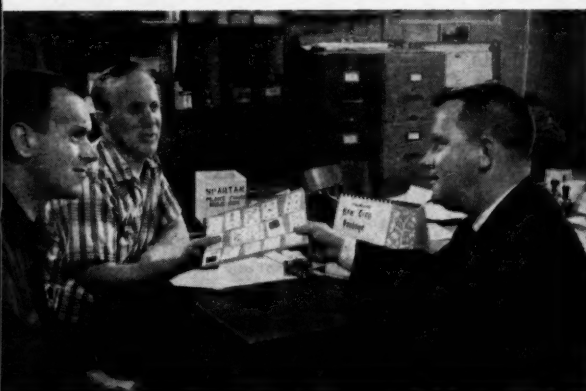
Simazine, in capital letters, for herbicides. Filed Nov. 4, 1957, by Geigy Chemical Corp., Ardsley, N.Y. First use Oct. 11, 1957.

program should really help sales!"



1. "The SPM informational advertising program has made a terrific impact on the market. As an example, we've received requests for product information from thousands of large growers and influence people. It indicates to us that growers are becoming more and more interested in magnesium."

2. "Although our advertising is primarily informational, we use the seal in each ad to acquaint buyers with the sign that identifies fertilizer with Sul-Po-Mag. As you know the SPM seal is available in printing plates, proofs, stickers, or tags so you can take advantage of our Sul-Po-Mag promotion."



5. "Sounds interesting, Bill . . . but could you leave this brochure with us? We would like to look it over and study your program in detail. I'm sure your materials may fit into our own advertising program."

6. "Thanks for your time, Alf and Bob. I'll keep you informed on everything new in our program, but if you have any questions or would like to use some materials, just let me know."

HERE'S THE FULL LINE OF IMC POTASH PRODUCTS



Standard Muriate of Potash

Coarse Muriate of Potash

Granular Muriate of Potash

Sulphate of Potash

SUL-PO-MAG® double Sulphate of Potash-Magnesia



PRODUCERS
OF
LIVING
MINERALS

26-59 R

POTASH DIVISION

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

Administrative Center: Skokie, Illinois



By including Sul-Po-Mag as your source of magnesium and sulphate of potash in your mixed fertilizers, you'll profit from this hard-working sales promotion campaign.

Japanese Beetle Traps Set Up in Ohio Town

HAMILTON, OHIO—John W. Baringer, chief of the Division of Plant Industry, announced that the Ohio Department of Agriculture, cooperating with local officials and the U.S. Department of Agriculture Plant Quarantine Division, will place a number of metal insect traps in Hamilton to obtain information on the occurrence and status of the Japanese beetle to aid in determining what control measures might be advisable.

Most of the traps will be placed in residential sections, and Mr. Baringer asked residents to cooperate by allowing the traps to be placed on their properties for a period of about six weeks. Traps function best when placed in sunny locations at least 15 ft. away from host plants, and residents were asked not to move the

traps without first consulting the inspector.

The Japanese beetle is an introduced plant pest. In the vicinity of New Jersey it appears as an adult beetle about the middle of June and is most abundant and active during July and August. Farther south it may appear earlier. The adult beetle is about ½ in. long, colored green and brown with rows of white spots down each side of the body. It is a voracious feeder, causing great damage to blossoms, fruit and foliage of many plants, including apple, peach, cherry, grape, corn, soybeans, elm, linden, rose and hollyhock.

Soon after emergence female beetles begin depositing eggs in the soil. After the eggs hatch the grubs feed on roots of grasses and other vegetation, causing considerable damage to turf in lawns and golf greens. The beetles over-winter as grubs in the ground.

Canada Firm Buys Chemical Fertilizer Plant

TORONTO, CANADA—The chemical fertilizer plant of Dominion Fertilisers Ltd., Port Maitland, Ont., has been purchased by the Electric Reduction Company of Canada, Toronto.

The plant produces phosphatic fertilizers. Its operation will be coupled with the Electric Reduction firm's multi-million dollar chemical project, recently announced by the company.

June Important Month in Cotton Control, Expert Says

ATHENS, GA.—C. R. Jordan, extension entomologist, named June as an important month in the cotton control program. He stated that much of the valuable bottom crop of cotton is formed in June, and this young fruit needs protection.

Mr. Jordan advised farmers to pick 100 squares one-third grown or larger while going across the field to estimate boll weevil infestation. If 10% or more of the squares are punctured it is time to begin weevil control.

The entomologist points out that bollworms begin work in June, and he said bollworm counts are made by examining the top 4 in. of 100 plants for bollworm eggs and small bollworms. When bollworm eggs and four of five small "worms" are discovered per 100 plants, insecticides for bollworm control should be put on.

It is well, the entomologist pointed out, to watch for rusty or speckled leaves which might mean that spider mites are on the cotton plants.

Safety Council Nominates Officers, Sets Meeting Dates

ITHACA, N.Y.—The nominating committee of the fertilizer section, National Safety Council, has approved for nomination:

1. Chairman—Elmer Perrine of the Nitrogen Division, Allied Chemical & Dye Corp.
2. Vice Chairman—Ansell Raney, Phillips Chemical Co.
3. Secretary—Gaither Newnam of Smith-Douglass Co., Inc.

In other business, plans were completed for the presentation of five regional safety schools for the fertilizer industry. They were: Northeast, Ithaca, Aug. 12-13; Midwest, Chicago, Aug. 18-19; Southeast, Atlanta, Ga., Aug. 22-28; Far West, Fresno, Cal., Nov. 5-6, and Southwest, Houston, Texas, Nov. 12-13.

Planes to Check Oak Wilt Areas in Tennessee

KNOXVILLE, TENN.—Aerial surveys for oak wilt in Tennessee began June 15 in Greene and Washington counties, according to U.S. Forest Service reports. These surveys are conducted each summer by the Southeastern Forest Experiment Station of the U.S. Forest Service in cooperation with the Tennessee division of forestry.

Evidence indicates that oak wilt probably spread into eastern Tennessee about 15 years ago and is slowly increasing. The disease situation in Greene and Washington counties, where research activities are centered, is fairly representative of the surrounding counties. Selected control treatments are being used on a trial basis by state forest pest control crews from the district forester's office in Knoxville.

Meanwhile, R. P. Mullett, entomologist and plant pathologist, reported that at least two species of spider mites were found in Henderson County. Wherever mites were found, a large number of eggs were present. Infestations are starting along the margin of fields, usually near places in the fields where mites were heavy last year.

Aphids were present in most fields, but damage is light.

A complex of thrip and flea beetles continues to hinder growth in young cotton.



James S. Barden

James S. Barden Named Miller Research Director

MINNEAPOLIS—James S. Barden has been named research director of The Miller Publishing Co., publisher of Croplife. Mr. Barden will be responsible for research activities of the firm's seven business publications.

Mr. Barden is completing work on his doctorate in journalism with specialization in research methodology at the University of Minnesota. In 1957 he was appointed research fellow and assistant director of the research division at the university. He formerly was research assistant in the research division of the school of journalism at the university where he began graduate work in 1956.

A native of North Dakota, Mr. Barden obtained a bachelor of arts degree in philosophy from the St. Paul Seminary.

Virginia Announces Grade Recommendations

RICHMOND, VA.—The Virginia Fertilizer Grade Committee, Department of Agriculture, held a public hearing on proposed grade changes for July 1, 1959 through June 30, 1960.

The grades which were changed include:

1. 0-15-30, deleted.
2. 4-12-12, deleted.
3. 5-20-10, added as starter fertilizer.
4. 20-20-5, added, and suggested for fish ponds.
5. 4-8-12 tobacco substituted for 4-8-10 tobacco.
6. 10-50-8, 10-40-10 and 17-17-17, added for started solutions and foliar spray.

All other grades recommended last year remained the same.

Cure for Magnesium Deficiency in Citrus Found

RIVERSIDE, CAL.—A promising method for correcting magnesium deficiency, which has become increasingly prevalent in California citrus in recent years, has been found by two University of California researchers.

T. W. Embleton and W. W. Jones, of the Citrus Experiment Station, Riverside, suggest orange tree foliage sprays of magnesium nitrate on a trial basis where deficiency symptoms are apparent. Application at 10 lb. in 100 gal. of water should be made when the spring flush of growth is about two-thirds expanded, Mr. Embleton and Mr. Jones advise.

"In our experiments, such sprays have resulted in substantial increases in the magnesium concentrations in orange tree leaves," they report.

"The treatment has practically eliminated symptoms of magnesium deficiency in six months, markedly reduced the occurrence of such symptoms in two months, and resulted in deeper green color in leaves that did not have deficiency symptoms."

MY FERTILIZER SALES

INCREASED **55%**

"I have set myself up on quality . . . quality mixed fertilizer and a quality nitrogen . . . John Deere Vitrea. For me, quality and service offer the best approach to selling fertilizer. It gets me out of the rat race of price cutting . . . makes me more profit.

"Quality products bring me more repeat business and at the same time many new customers. This past season my fertilizer sales were up 55%.

"Our soil testing, mapping, farm planning and other services help get customers on a good program . . . once they are on such a program they stay good customers.

"Some of the things I particularly like about handling Vitrea is the excellent service I get on deliveries — furthermore I know I can consistently depend on getting highest quality. And too, Vitrea bags always arrive in good shape with less breakage than other types I have previously handled.

"You can bet Vitrea will play a big part in my profit picture again this year."

RALPH SNELLING
BOSWELL, IND.



RALPH SNELLING
SNELLING FARM SERVICE
BOSWELL, INDIANA



With John Deere VITREA — 45% nitrogen from urea — you can depend on getting the quality and service that is sure to please your customers and boost your profits.

TODAY, VITREA IS A BETTER BUY THAN EVER!
ORDER NOW!



JOHN DEERE COMPANY



EARL HOGLUND, owner of the Kasson (Minn.) Elevator, makes his own fertilizer deliveries because he feels he has a better chance of selling farmers more fertilizer that way. In the right photo above, Mr. Hoglund fills a supply tank with anhydrous ammonia prior to hauling it to a customer's field. The



right photo shows the firm's neatly lettered truck which is used when making deliveries. The truck has just pulled into a farm yard where Mr. Hoglund will attempt to make an additional fertilizer sale.

For Additional Sales . . .

Dealer Makes 'Personal' Deliveries

By **AL P. NELSON**
CropLife Special Writer

Earl Hoglund, owner of Kasson Elevator, Kasson, Minn., likes to deliver fertilizer himself, rather than have an employee do it. He sells both anhydrous and dry fertilizer, and the reason he likes to deliver it is that he frequently can "up" the sale of fertilizer at the time of delivery.

Recently he delivered 20 tons of anhydrous to a large corn farmer, and when the last load had gone out to the farmer, Mr. Hoglund managed to talk to the customer for the third time. He urged him to use additional anhydrous as sidedressing on another patch of corn. The farmer finally agreed, and Earl sold him another 10 tons.

"The farmer is open to additional sales presentations between the time when he places his spring order and when he actually uses the fertilizer," says Mr. Hoglund, "and I never forget this. When he gets his soil test report he may hedge a little on his fertilizer order thinking he can get by with less. Then after he has plowed and seeded part of his crop, he gets a little more enthusiastic about crop outlook. This is the time, I have found, to contact him and try to sell additional fertilizer. I have increased my anhydrous and also the dry fertilizer sales by this approach."

Last year Mr. Hoglund and his men applied anhydrous to about 1,000 acres of corn land in this region. The charge for anhydrous runs from 12 to 14½¢ per lb. applied, depending upon the amount the farmer buys.

Earl leases his anhydrous fertilizer storage facilities from the Minnesota Liquid Fertilizer Co. The plant is located one block from his feed mill and elevator.

"We find that farmers are ready to stop work and talk fertilizing almost any time," Mr. Hoglund says. "They are very interested in learning how they can increase their crops at a profit without adding more land. I have accumulated a lot of data on crop yields through fertilization by various farmers in the area. I carry this material with me on deliveries and on field calls, and use it in selling. It is very valuable in this respect. Farmers always like facts, and if the facts are about lo-

cal farming conditions and results, they are much more impressive."

Mr. Hoglund hauls a lot of the anhydrous to farms with a light Ford pickup truck, equipped with mud tires. He can haul the supply truck to any spot on the farm where the employee with the applying equipment is ready. Then Earl can unhitch his pickup truck and drive to where the farmer may be plowing or seeding and try to sell additional fertilizer.

"If I don't find a farmer at home

when I call—if he is in a distant field working—I can drive the light pickup right over the fields and stop and talk with him," he says. "They'll usually give you 15 minutes or more depending on how busy they are."

Mr. Hoglund firmly believes in soil testing. In fact, he will gladly collect soil samples for farmers, because he knows that it pays off in more sales. It takes very little time to get soil samples, and then the dealer has an opportunity to

come back with state soil lab recommendations, and he has an excellent chance to get a fertilizer order.

"I know that a lot of dealers don't like to take the time to obtain soil samples from farmers," Mr. Hoglund says. "It does take time, but when you offer to do it for the farmer you are rendering him a service which he appreciates. Farmers generally put off taking soil samples. They have

(Turn to 'PERSONAL,' page 15)

Iowa Firm Offers Large Variety In Fertilizer Spreading Service

When the farmer buys fertilizer at the Klemme Cooperative Grain Co., Klemme, Iowa, in the heart of an excellent corn and hog area, he can get spreading service for both liquid and dry fertilizer.

If the farmer buys dry fertilizer in bulk, it is hauled direct to his farm from a plant at Forest City, Iowa, and spread. The Klemme elevator, of course, sells the fertilizer and handles the billing, but the fertilizer itself does not go through the Klemme headquarters. The charge for bulk spreading of dry fertilizer is \$2 per ton.

Now if the farmer wants a complete analysis liquid fertilizer he can also get this at the Klemme firm. If he wants a custom liquid fertilizer, made especially for the requirements of his soil—based on a soil test—he can get this. If he wants his corn sidedressed, the Klemme firm will handle it. And if he wants straight liquid nitrogen, this also is available.

This complete all around service is one reason why the Klemme Cooperative Grain Co. does an excellent fertilizer business. No matter what the fertilizer problem, or what kind of fertilizer the farmer wants, he can get it at the Klemme company.

Marvin Lemke is manager at the firm and Elmer Wessels is in charge of fertilizer sales. The firm has storage tanks for fast turnover liquid fertilizer analyses. Such fertilizers are pumped into a truck

holding tank. Then this truck moves into the field, and sprays liquid fertilizer with a 30 ft. boom over the land.

Liquid fertilizer is sprayed for fall plowdown and also in spring for a starter. Application of liquid nitro-

(Turn to IOWA FIRM, page 13)

HOME BUILT plywood store fixtures (right) display farm chemicals at the Klemme Cooperative Grain Co., in Klemme, Iowa. The photo below shows the firm's truck with tank filled with liquid fertilizer. The truck has a 30 ft. boom so that fertilizer can be sprayed on the land for the farmer.



WHAT'S NEW

IN PRODUCTS • SERVICES • LITERATURE

No. 6928—Heptachlor Selling Course

Velsicol Chemical Corp. is distributing a "Heptachlor Salesman Insect Control Refresher Course." According to the company, the course is designed to educate dealers on the use of insecticides, but is appropriate for formulators and distributors' salesmen. Included in the course are a number of lessons, Heptachlor promotion materials and order form listing all available promotion pieces. Catalog sheet M-51 tells about the Heptachlor dealer "Sales-BUILDER" program. For details about the course, check No. 6928 on the coupon and mail to this publication.

No. 6929—Sprayer Spacing Attachment

A device that the manufacturers say is the answer to varying row spacing and needed extra stability for high clearance self-propelled spraying equipment has been announced by Century Engineering Corp. The unit is called the No. CHC-31AT, and is a telescoping device that can be attached to the rear frame of a high clearance carrier to permit the rear wheels to be adjusted anywhere from 72 in. to 150 in. It is available with new equipment or can be added to Century carriers now in the field. With the attachment the equipment can be used on unlevel ground and on seed beds up to 6 ft. wide. For more details check No. 6929 on the coupon and mail.

No. 6927—Orchard Fertilizer Applicator

General Metals, Inc., has announced a new applicator designed especially for applying nitrogen solutions and

complete liquid fertilizers to orchards. Trailer Applicator Model 450 consists of a trailer frame, special boom, heavy-duty tank saddles, 235 gal. aluminum or stainless steel tank, Dempster Metering Pump, front end jack and a special shield to stop limbs from getting caught in the applicator and doing damage to the trees. The frame is constructed of heavy 4 in. channel iron and is mounted on 15 in. automotive wheels. The trailer has a front end, top crank jack for positioning the trailer hitch. The pump is driven direct from the ground wheel of the trailer by roller chain. The pump's setting dial can be set at any of 14 positions and adjusted to intermediate positions to give low or high rates of application. Check No. 6927 and mail for details.

Also Available

The following items have appeared in previous issues of Croplife. They are reprinted to help keep dealers on the regional circulation plan informed of "What's New."

No. 6921—Fertilizer Spreader

The John Blue Series "800" Chemi-Spreeder has been added to the 1959 line of the John Blue Co., Inc. The unit can cover up to 20 acres an hour at rates in excess of 60 gal. an acre on a 28 ft. swath and more than 80 gal. an acre on the 21 ft. swath, company literature said. The unit's entire chassis is cold formed and welded. The boom is constructed of cold-finished steel and a wide choice of nozzles is available, both broadcast



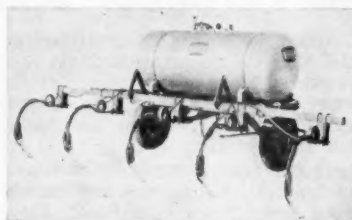
and dribble type. A tool bar for sub-surface application is also available. The broadcast nozzles are of stainless steel with a 40 in. spacing and a special wide angle pattern. More details can be obtained by checking No. 6921 on the coupon and mailing.

No. 6920—Insecticide Report

A booklet entitled "The Special Values of Pyrethrum Insecticides" is being distributed by Charles Hurd Associates. The booklet contains a report by the Armed Forces Pest Control Board which has compiled worldwide research study results on pest control problems faced by military units. With permission, the document was reproduced in full in this booklet for the information of civilians who face the same problems in the U.S. The booklet is distributed as a public information service on behalf of the pyrethrum growers in British East Africa and the Belgian Congo, who grow the bulk of pyrethrum used in the U.S. Details of the product's effectiveness, toxicity, etc., are included. For copies, check No. 6920 on the coupon and mail.

No. 6918—Ammonia Applicator

John Blue Co., Inc., has introduced an ammonia applicator called the



"Blue Nitro-Shooter" series "80." The machine has a tank capacity up to 310 gal., full 26 in. clearance, transport lock, alloy steel spindles, heavy duty Timken bearings, 12 ft. tierod free, 3 in. sq. tool bar and a short turning radius. It has a welded chassis. The machine comes with either 100, 150, 200, 250 or 310 gal. tanks. The metering device is a AND-Y pump or Nitrolator with speed and quantity control. The chassis has an 80 in. tread and over-all width of 96 in. The applicator comes with 1 1/4 or 1 in. alloy steel spring tine or high carbon rigid shank. The tool bar has an 8 ft. straight or 14 ft. folding length. For details, check No. 6918 on the coupon and mail.

No. 6924—Hand Insecticide Applicator

A hand applicator for use with Dri-Die Insecticide 67 has been designed by W. R. Grace & Co., Davison chemical division. The device consists of a polyethylene container to which two attachments can be fitted. One is a long nozzle to blow the pow-

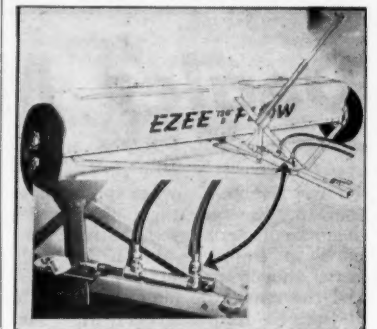
der into spaces where general distribution is desirable but not objectionable. The other is a spreading device which will roll the insecticide on a strip of surface accessible to the insects but which will avoid general dusting through the atmosphere. For details, check No. 6924 on the coupon and mail to this publication.

No. 6926—Fruit Spray Chart

A chart which outlines recommended procedures for the control of a number of deciduous fruit tree insects and mite pests has been published by Stauffer Chemical Co. Major emphasis is on dosage recommendations of Trithion for delayed dormant, dormant and summer sprays and for post-harvest application to deciduous fruit. Crops include apples, crab apples, pears, cherries, plums, peaches and grapes. Copies of the chart can be obtained by checking No. 6926 on the coupon and mailing.

No. 6922—Spreader Accessory

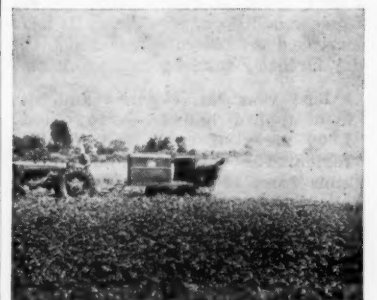
Ezee-Flow Division of Avco Distributing Corp. announces the availability of a "hydraulic control" accessory that fits all Ezee-Flow



spreaders. The hydraulic control cylinder automatically opens and closes hopper shutters by a single lever. It is no longer necessary to operate hopper shutters manually. The lever is on the tractor seat. Full details and a fertilizer application guide are contained in a booklet available from the company. Check No. 6922 on the coupon and mail.

No. 6925—Air-type Power Sprayer

A swath up to 60 ft. wide can be covered with one trip across a field with the John Bean Model 30-RC Aircrop Sprayer, announced the John Bean Division of Food Machinery & Chemical Corp. The unit is the latest addition to the firm's line of Air-crops. Another new model, the 40-RC



Aircrop, a self-contained sprayer, will spray a swath up to 90 ft. wide. For more details, check No. 6925 on the coupon and mail to this publication.

No. 6923—Insecticide Sprayer

A new mobile insecticide sprayer is available from West Chemical Products, Inc. The unit was developed for large or small areas where compressed air is unavailable for fogging. It has a spray head of five aerosol nozzles that dry fogs insecticides

Send me information on the items marked:

- | | |
|---|---|
| <input type="checkbox"/> No. 6912—Spreader Literature | <input type="checkbox"/> No. 6924—Hand Insecticide Applicator |
| <input type="checkbox"/> No. 6913—Folder on Miticide | <input type="checkbox"/> No. 6925—Air-Type Power Sprayer |
| <input type="checkbox"/> No. 6914—Soils Moisture Chart | <input type="checkbox"/> No. 6926—Fruit Spray Chart |
| <input type="checkbox"/> No. 6915—Folder on Weed Killer | <input type="checkbox"/> No. 6927—Orchard Fertilizer Applicator |
| <input type="checkbox"/> No. 6917—Soil Fungicide Guide | <input type="checkbox"/> No. 6928—Heptachlor Selling Course |
| <input type="checkbox"/> No. 6918—Ammonia Applicator | <input type="checkbox"/> No. 6929—Sprayer Spacing Attachment |
| <input type="checkbox"/> No. 6920—Insecticide Report | |
| <input type="checkbox"/> No. 6921—Fertilizer Spreader | |
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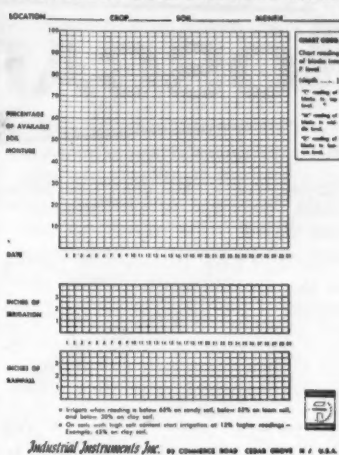
No. 6913—Folder on Miticide

A revised folder on "Genite," a miticide which is said to kill plant mites and their eggs in one spray, is available from Allied Chemical. The folder contains spraying information, and describes features of the product. Economics of using the spray are discussed and general use information is given. For copies, check No. 6913 on the coupon and mail to this publication.

No. 6914—Soil Moisture Charts

Industrial Instruments, Inc., announces the availability of a pad of soil moisture charts for plotting measurements obtained for Bouyoucos Soil Moisture Meters and Blocks. Each chart provides room for recording percentage of soil moisture for a 31 day period as well as separate

BOUYOUCOS SOIL MOISTURE CHART



charts for indicating inches of irrigation and inches of rainfall. A free pad of these charts is available to Bouyoucos meter users. Check No.

6914 on the coupon and mail to this publication.

Chemical Employment Holds Steady in Delaware

WILMINGTON, D.E.L. — Employment in chemical manufacturing remained steady in Delaware during April. The employment level was estimated at 25,800, the same as in March, according to the monthly report of the Delaware Unemployment Compensation Commission.

The chemical industry in this area, which had expanded rapidly during the past few years, employed 1,300 fewer workers in April than for the corresponding month in 1958 when the employment total was 27,100.

Average weekly earnings of the production worker increased between March and April from \$123.82 to \$124.64. An increase was noted in average hourly earnings, \$3.02 in March and \$3.04 in April. The work week remained at the same level, 41.0 hours.

three times faster than two-nozzle sprayers, the company said. The unit is designated the "Spacemaster." The unit produces a dry fog of insecticide particles in the aerosol range of 12 to 15 microns average diameter. With the proper insecticide, flying insects in 5,000 cu. ft. can be fogged in one minute, company literature stated. Range is from 40,000 to 50,000 cu. ft. from one position. Details are available by checking No. 6923 on the coupon and mailing.

No. 6915—Folder on Weed Killer

A folder is now available on "Urox" weed killer from Allied Chemical. According to the folder the product can be sprinkled or spread on soil to kill all weed growth in non-crop areas. The folder is illustrated with photos showing some of the weed control results that can be expected. General use information and application are included. For copies, check No. 6915 on the coupon and mail to this publication.

No. 6917—Bean Fungicide Guide

A Terraclor application guide for beans giving detailed information on the use of this soil fungicide is now being distributed by Olin Mathieson



Chemical Corp. The illustrated 4-page guide's objective is to control root and stem rot and white mold. The guide tells how to get the most from Terraclor. It is a compilation of work by Olin Mathieson fieldmen, federal and state research personnel and growers who have used Terraclor to control the disease. Additional information can be obtained by checking No. 6917 on the coupon and mailing.

No. 6912—Spreader Literature

Literature on the "New Leader L-32S" engine driven combination lime and fertilizer spreader is available from Highway Equipment Co. The illustrated brochure contains specifications, construction features, detailed drawings of various components of the spreader and operating information. A section on optional attachments, with appropriate illustrations, is also included. For copies of the literature, check No. 6912 on the coupon and mail to this publication.

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OSCAR & PAT

The trip to West Virginia was a delightful interlude to Pat and Nora; a pleasing vacation, particularly since it followed so closely on the heels of Pat's heated argument with Oscar about spending the money necessary to come to the NPFI convention. The crisp mountain air was sweet to the McGillicuddys, and their sense of freedom from the store was intensified by the broad vistas of scenery as they rolled through the Virginia countryside.

"I've never seen such a beautiful sight," Nora breathed to Pat as their five-year-old car cruised along the crest of a mountain on the

Skyline Drive. "We don't have anything like this in the Midwest," she added.

Pat had been thoughtfully puffing on his pipe, obviously enjoying every minute of the trip. The highway was not crowded; the car was running well; the mountain air was invigorating, birds were singing, and the struggles of Schoenfeld and McGillicuddy seemed dim and distant in his mind. "You're right, Nora," he replied. And glancing at his watch, "We ought to be getting to the Greenbrier in a couple of hours now."

Arrival at the huge white hotel

with its tall pillars and artistic landscaping was characterized by lots of bustle at the entrance as a small army of green-clad porters swarmed over the incoming vehicles to remove baggage, golf bags and clothing from the cars. Pat and Nora were wide-eyed at the plush surroundings and as they waited in the drive for their turn to be unloaded, Pat whispered, "Nora, they say the NPFI people are very friendly, and I'm sure glad. Otherwise, I'd feel out of place. . . . Our whole 20-room Grand Hotel at home would rattle around in just the lobby of the Greenbrier!"

Finally their turn came and their car wheezed to a halt at the spacious

entryway. A courteous porter opened the car door to assist Nora in stepping out. "Good afternoon, ma'am," said the uniformed welcomer. Nora smiled timidly and stepped lightly out of the car as Pat walked around the other side trying to appear nonchalant, as though arriving at the elegant Greenbrier was an every week experience.

By now the porters had Pat's cowhide bag and Nora's faded simulated leather bag and small handbag out of the trunk and appeared slightly puzzled at the absence of golf equipment and additional baggage. "Well, I guess that's about all," Pat volunteered, noting the boy's wondering look. "Just go on in, suh, and we'll bring your bags," the boy instructed, so Pat and Nora entered the broad glistening hall, went down the few steps to the registration desk and for a moment were confused at the bustle of other conventioners being assigned to rooms and cottages, asking about mail and telegrams, and greeting each other warmly. Everyone seemed to know the others, Pat noted, but of course "no one will know who I am," he thought to himself.

The tall, blue-eyed Irishman did stand out in the crowd, however, and as he waited, a friendly hand was extended to him and a voice said, "I'm Paul Truitt of the Plant Food Institute. I don't believe I know your name."

"Oh . . . How do you do, Mr. Truitt," Pat replied quickly, then grinned. "I've heard of you, Mr. Truitt. I'm Pat McGillicuddy. I am with a fertilizer store in the Midwest . . . thought I'd spend my vacation picking up some expert information on better selling methods and other ideas here. The program sounded mighty interesting."

Mr. Truitt expressed hope that the program would indeed be helpful, shook hands again and was then on his way.

After the "shakedown" process of getting acquainted with their new surroundings, Pat and Nora began to feel quite at home at the hotel. Conventioners were on hand from many companies with which Pat had done business, all with friendly greetings, as were other persons whose names he recognized from USDA, state experiment stations and college reports.

Nora found a pleasant group of ladies, took part in a putting contest, tried her hand at shuffleboard, watched the tennis matches and took note of how the golfers teed off. She even took a moment to watch a horseshoe pitching contest en route to the casino. She enjoyed every moment of the delightful days and evenings.

Pat was there for business. He attended the speaking sessions and was thrilled to meet more of the "names" he had heard about for many years. Russ Coleman, Dick Bennett, Raoul Allstetter, Louis Wilson, and several of the regional directors of the Institute. He was in a fine mood, was gathering many ideas from the speakers, and somehow could hardly make himself realize that Oscar was all that time sitting grimly at his desk at the store, figuring discounts and tossing paper clips in the jar. This all seemed so dim and distant now. How could Pat ever convey to Oscar the inspiration he felt at this convention? It bothered Pat just a little.

"Oscar will never believe that this trip was worth while," he mused. "I just wish that he could look in on one of the sessions and see how earnest everyone is and how seriously they discuss selling. It might change his attitude just a little."

Pat's little notebook was fairly bulging with jottings and ideas and marginal notes of names he wanted to remember. His blue eyes snapped with enthusiasm for putting into ac-

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MEREDITH PUBLISHING COMPANY, Des Moines . . . with offices in New York, Chicago, Detroit, St. Louis, Philadelphia, Cleveland, Atlanta, Minneapolis, San Francisco, Los Angeles.

tion some of the methods and techniques he heard discussed.

"Our firm will never be the same again," he vowed to himself. "Old Oscar just has to let me apply some of these ideas. Why, the profit our customers get from fertilizer is about ten times what we make from selling it to them . . . therefore, why can't we increase our volume and make more out of the fertilizer we sell?" he reasoned to himself as one of the speakers touched on these points. His fingers were cramped from writing and the point of his pencil dulled, but he kept on writing, writing, writing.

Wary and a little tense from having concentrated so hard listening to the talks, Pat refreshed himself in his room and dressed for the Tuesday night banquet, final event of the convention. Nora recalled to Pat that this social event was a big one in her life, and her new evening gown reminded her of their wedding many years ago.

A telephone call interrupted their getting dressed. It was a nitrogen supplier inviting Pat and Nora to sit at their table at the banquet. "We'd love to have you join our group," the voice said. Nora's vigorous affirmative nod prompted Pat to accept, and down they went to the veranda for the big reception preceding the banquet itself.

The reception, the banquet and the jolly group at the table all combined into a fitting finale for the greatest business-and-social event of their lives. "This is a vacation we'll never forget," Pat told Nora as they returned to their room in the wee hours of Wednesday morning. "It will more than repay what we spent here, and even old Oscar, with all his penny-pinching, will profit indirectly from what I've learned here . . . but he'll probably never admit it. Believe me, Nora, that store and our whole fertilizer promotion is going to start working on a stepped-up schedule from now on."

IOWA FIRM

(Continued from page 9)

gen for sidedressing on corn takes a little longer than straight spraying, reports Mr. Wessels, and thus costs the farmer \$1 per acre. For spray application the charge works out to about 50¢ per acre.

In a large number of instances farmers have invested in liquid fertilizer storage equipment. In such cases the Klemme firm brings the liquid fertilizer to the farm where it is pumped into the farmer's storage tanks. The farmer then pumps the liquid into his corn planter attachment tank when he gets ready to use it.

The Klemme firm offers a free soil test to farmers who buy their fertilizer from the company. Mr. Lemke and Mr. Wessels are constantly stressing the importance of soil testing in relation to the buying and applying of fertilizer for the most profitable crop results. Mr. Wessels reports that farmers are getting more receptive to fertilizer and crop production information, as many of them now see what excellent results can be obtained by using the recommended amounts of fertilizer.

The Klemme firm has an excellent price board for feeds and farm supplies, and two smaller price boards for fertilizer. One deals with liquid fertilizer prices; the other lists dry fertilizer prices, both in ton lots. The boards are of the new metal type. When farmers stand at the order desk they can read these price boards very easily.

Since the boards are up all year around, with figures changing now and then, fertilizer gets constant attention from store and office traffic.

The amount of fall plowdown business obtained in this area, Mr. Wessels reports, often depends upon the

weather. If the corn matures late, then the season for spraying liquid fertilizer is delayed and frost may creep up before many weeks have elapsed. Dry fertilizer can be spread later, of course, but many farmers in this region still like to apply dry fertilizer before the ground is frozen. In some other sections of the state, farmers spread dry fertilizer in 6 in. of snow.

The Klemme firm has an excellent farm supplies store. It and the office area are all in one large room. Some special fixtures to hold farm chemicals and other farm items have been built by the company's carpenters. These new fixtures allow the display of many packaged farm chemical items.

The more traffic that a farm supply firm can attract, the more opportunity the management has to sell fertilizer, farm chemicals, and related merchandise. One of the big sales promotional events at this elevator is the annual "Silver Dollar

Day." If the farmer buys and pays for a ton of fertilizer, feed or a bag of alfalfa seed on Silver Dollar Day, he gets a free silver dollar. If he buys and pays for 10 tons of fertilizer, then he gets 10 silver dollars.

This merchandising event really attracts many farmers. It swells cash sales for that day and helps the Klemme firm, too, to get many tips for future sales. Coffee and sandwiches are served all day long for the many customers.

Operating a big feed and elevator business, too, the Klemme firm has recently put in a 165,000 bu. government storage building. It has two grain driers, a pellet mill and other milling machinery. The cooperative has been cited several times as one of the most outstanding small town groups of its type in Iowa. Fertilizer and farm chemical sales make up a sizable part of the annual volume.

Nitrogen Increases Grain Sorghum Yield

HALFWAY, TEXAS—An application of 120 lb. of nitrogen per acre almost doubled a grain sorghum yield last year at the High Plains Research Station. Fertilized plots made a yield of 6,056 lb. an acre while non-fertilized plots of grain threshed only 3,623 lb. to the acre.

The net return after deducting fertilizer costs was \$30.05 an acre more than on the other land. The 120 lb. seemed to be about the optimum amount, according to Dr. T. C. Longnecker, head of the station, because 160 lb. of nitrogen brought only 66¢ an acre more profit than the 120-lb. test plots.

Since this is one of the greatest grain sorghum producing regions in the world, farmers have been urged to study these reports in planning for summer sidedressing. The fertilizer was applied both as pre-planting application and as sidedressing. Appar-

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FARM SERVICE DATA

EXTENSION SERVICE REPORTS

Two University of Wisconsin scientists are investigating a part of the soil called "clay skins."

This term is used by scientists to identify the thin layer of clay that coats the building blocks of a typical sub-soil. Clay skins also fill in natural cracks and jut into crevices and openings left by plant roots.

University soils researchers S. W. Buol and F. D. Hole—after probing down below plow depth to study these clay skins—report that the delicate films may be of considerable impor-

tance in deep-rooted plant growth.

So far the study has been mainly basic in nature—concentrating on the characteristics and distribution of clay skins. The researchers have uncovered several properties of clay skins that might open the door to vital new plant feeding studies.

For one thing, clay skins are much richer than the bulk of the sub-soil in plant nutrients. Tests show that clay skins in some soils hold—percentage-wise—at least three times more nitrogen and carbon, and twice as much free iron.

Also clay skins hold nearly four times as much organic matter.

Water-retention is another strong point of clay skins. They can catch and hold more moisture than the sub-soil blocks.

The researchers say it's possible that plant roots do much of their feeding from clay skins. They report that, in some soils, plant roots seem to seek out and follow clay skin patterns. This way the roots are able to move along natural fissures and find a rich supply of nutrients at the same time.

This is important because plants such as alfalfa and corn often extend roots deep into the subsoil.

The time may come, say Mr. Buol and Mr. Hole, when fertilization of sub-soil will become important. If and when this happens, clay skins could form reservoirs for some plant nutrients.

The researchers point out that sub-soil blocks aren't the only carriers of

clay skins. In some sandy soil types, each particle of sand is coated with a clay skin. The Plainsfield sand is one of these. This may help explain, say the researchers, why crop yields may be higher on this soil than many types of sand.

★

Sulfuric acid clears up a yellowing of the leaves in pin oak, one of the most popular of shade trees.

This is the report of John Haskaylo and Paul Struthers, scientists at the Ohio Agricultural Experiment Station.

The chlorosis of the foliage occurs when soil is too "sweet." In this case the trees starve for iron. Adding the sulfuric acid sours the soil around the trees and quickly changes the leaves from a yellow cast to a normal green.

Iron chelates also were successful in correcting the chlorosis but it was considered wiser to change the soil permanently rather than to rely on chelates which have only temporarily corrected the iron deficiency.

Chlorosis of these ornamental oaks is apt to occur only where excessive amounts of lime have been spread in the vicinity.

★

What about spraying crops to kill weeds—is it worth it? Yes, says Bjorne Naaden, North Dakota Agricultural College assistant extension economist, who estimates that, on small grains, North Dakota farmers lose about \$75 million a year because of weeds.

Mr. Naaden figures it costs a farmer about \$6 per acre to put up with weeds. Crop damage from wild oats accounts for about half of that loss on a statewide average. That leaves \$3 per acre to be blamed on broadleaved weeds, and that's money down the drain unless chemical sprays are used to save it.

Weed control with a ground sprayer costs about \$1 per acre, figuring in cost of spray, machinery and labor. Aerial spraying runs about \$1.25 to \$1.50 per acre.

L. A. Jensen, NDAC extension agronomist, stresses that being there with the right spray at the right time results in effective weed control, minimum crop damage and maximum crop returns per acre.

Stopping wild oats is still a matter of cultural control. But weed chemicals have made the broadleaved weeds readily controllable, giving the farmer his chance to increase his crop revenue without adding extra acres.

★

Research at Midwestern agricultural colleges indicates that most farmers could triple their profits by the use of the right kinds and amounts of fertilizer.

That was the statement of Dr. Moyle S. Williams, chief agricultural economist of the National Plant Food Institute, based on results of tests by Midwestern agronomists.

"From all the evidence we have accumulated from the experience of good farmers, there still seems to be a great opportunity today to increase the applications of fertilizer on individual farms," says Dr. Williams.

"Of course, some farmers already are fertilizing at top money-making levels. But the average farmer apparently still has plenty of room to cut his costs of production and increase his net income through the proper use of plant food."

Dr. Williams said that price-wise, fertilizer is a good buy for farmers today.

"Over the past few years, fertilizer prices have remained at about present levels, while other costs have been rising steadily," he says.

"By increasing his crop producing efficiency through the use of fertilizer, the farmer can cut down on the acreage he devotes to crops and still

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★

Yearly fertilizer applications are a "must" for maintaining pasture stands and keeping production on an even keel.

That is the conclusion of two University of Kentucky agronomists—E. C. Doll and A. L. Hatfield—in the Midwest division of the National Plant Food Institute.

The research men studied results with an orchard-grass-fescue-ladino clover mixture on test plots in a pasture that had been fertilized at seeding time on the basis of soil tests.

After seeding, one plot got an annual application of 300 lb. of 0-10-20 fertilizer. The other plot got no additional fertilizer after the seeding time application.

Both plots produced about identical amounts of dry matter the first year, but thereafter yield differences were steadily in favor of the plot getting maintenance fertilizer applications. The second year, this plot yielded about 500 lb. more per acre than the unfertilized plot, and the third year 900 lb. more.

Clover growth is running out on the non-maintenance plot, Dr. Doll and Mr. Hatfield report. At present this plot has only 50% as much ladino clover as the plot getting yearly fertilizer treatments. Renovation will soon be needed on this non-maintenance plot, according to the Kentucky agronomists.

★

Well fertilized wheat produced 7.7 more bushels per acre with only six-tenths of an inch more moisture than did wheat grown on less fertile soil, reports Dr. Ralph A. Young, North Dakota Agricultural College agronomist.

"These results were obtained in 29 field trials over a six-year period," says Dr. Young.

In the field trials, the well-fertilized fields received both nitrogen and phosphate. Other plots received phosphate alone, while still others received no fertilizer at all. Soils in the test areas were well supplied with potash, Dr. Young said.

"At harvest, the top 5 or 6 ft. of well fertilized soil contained only six-tenths of an inch less moisture than did the low fertility plots," he says.

Wheat and barley on fertilized fallow land outyielded grains on non-fallow land by about 20% in 24 trials in 1958, Dr. Young reports.

★

From Kentucky comes a report that the success or failure of a legume-grass seeding may depend on the fertilizer treatment—particularly in areas where freezing and thawing result in considerable heaving.

Dr. Eugene C. Doll, University of Kentucky agronomist, says the importance of proper fertilization at seeding time "cannot be overemphasized."

As an example, he reports that fertilized pasture yielded 9.3 tons per acre over a three-year period, compared to 3.6 tons on an unfertilized check plot.

At seeding time, the fertilized pasture received phosphate and potash at the rate of 120 and 60 lb., respectively, per acre. In addition, the field was top-dressed each spring with fertilizer supplying 30 lb. of phosphate and 60 lb. of potash per acre.

Dr. Doll said that yields of both hay and pasture could be greatly increased by fertilization based on soil tests and by improved management practices.

He underscores the need for proper pasture management, to get maximum returns from high yielding pasture and to maintain the

most desirable mixture of legumes and grasses.

"This relationship between management and production is probably a more critical factor in intensive pasture production than in any other agronomic crop," he says.

'PERSONAL'

(Continued from page 9)

heavy work schedules, especially on modern farms, and taking soil samples is something which can be put off from week to week. Milking cows, feeding livestock and removing manure are things which the farmer cannot postpone."

Mr. Hoglund believes in advertising. He spent \$65 to have his Ford pickup truck repainted. He lettered it with feed and fertilizer advertising, and he also stresses the fact that soil testing is free.

"This truck advertising has paid off

in a very short time," says Mr. Hoglund. "Farmers stop and read the lettering when my car is parked in their yards, or on city streets or along country roads. They know what services I can perform for them. A well lettered truck is a traveling advertisement. I can recommend it to any dealer. Just think how many places a truck travels in a month. If it isn't attractively lettered, nobody notices it. But if it has clean bright lettering, it can sell for a dealer."

Because of his numerous contacts with farmers, Mr. Hoglund is able to ask them to buy fertilizer at the proper seasons. For instance, he and a local produce dealer are working out a quality egg program which will permit the independent farmer to reap the advantages of an integrated program and still retain his financial independence.

Mr. Hoglund and the produce dealer assist in financing so that a farm-

er can get a 10,000 laying hen house and equipment financed, as well as the chicks and feed. The produce company provides a market for quality eggs and has guarantees from a Philadelphia market that it will take a semi trailer load of eggs every week.

An interesting part of this program is that the farmer can "buy himself out" of any chick or feed or housing commitments at any time. However, Mr. Hoglund offers the farmer so much flock supervision, etc., that he figures the farmer in the quality egg program will want to buy chicks and feed from him. The present egg program calls for 30 farmers to build laying houses which will have 10,000 layers each.

"Naturally in pushing such an egg program I visit many farmers, and I manage to take enough time to inquire into farmers' fertilizer needs, too," Mr. Hoglund states. "I have sold a lot of fertilizer by stepping up my contacts with farmers."

Monsanto's "Red" Emm says:

HERE'S A WEED-KILLER LINE THAT SELLS ITSELF...

The display, the product, and the container—all of them sell for you

This display answers your customers' questions. It's a full size, life like reproduction of Monsanto's "Red" Emm. Your customer just dials the crop selector to find out what to use for his particular weed or brush problem. "Red" saves you time...and tells your customers what weed killers to buy!

Quality products always get repeat sales...and farmers know they can depend on the Monsanto Brand. Seven weed killers, six brush killers and two new spray-as-you-plant weed killers... Radox® and Vegadex®...give you a full line to stock!



The containers "tell" and "sell". With every Monsanto can—including the new 5 gallon, "easy-flow" spout-top can—your customers get complete, step-by-step directions. The special packet tells the farmer in plain language everything he needs to know!

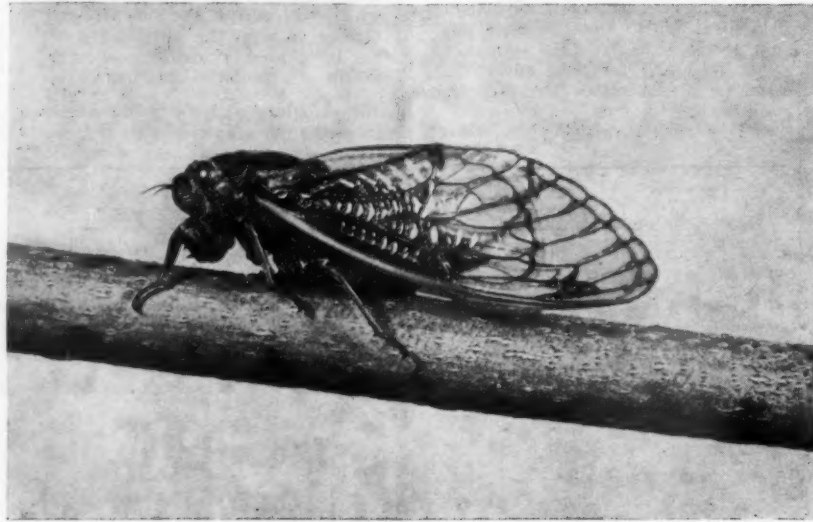
P.S. Let me tell you more about how the Monsanto line can help you sell this year; Mail the coupon today!

MONSANTO CHEMICAL COMPANY,
Organic Chemicals Division,
Farm Chemicals Department, St. Louis 66, Mo.
Please send me more information on the
Monsanto Weed and Brush Killer line.

Name _____
Firm _____
Address _____
City or County _____ State _____

BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



Periodical Cicada

How to Identify

These insects, often called the "17-year locust", are about $1\frac{1}{2}$ in. long in the adult stage (shown above). Most of its body is black, the legs are reddish, some of the veins in the nearly transparent wings are orange, and its eyes red. Periodical cicadas, closely related to common cicadas, have become the subject of odd superstitions and stories regarding their appearance. Actually, they are not "locusts" at all.

Habits of Cicadas

Mystery surrounds the instinct which urges nymphs to emerge from the ground after spending 13 years (in the south) or 17 years (in the north) in the soil at depths from 18 to 24 inches. Female cicada punctures the bark of a twig and makes a pocket in the wood, where she lays some two dozen eggs in a couple of rows. From five to twenty such pockets are made in a twig, and the total number of eggs a single female can lay number from 400 to 600. These eggs hatch in about 7 weeks and the hatched-out nymphs fall to the ground into which they burrow until they find roots from which they might suck juice. The nymphs remain alive in the ground for 13 or 17 years, at the end of which time they burrow upward to within about an inch of the surface. Here they halt

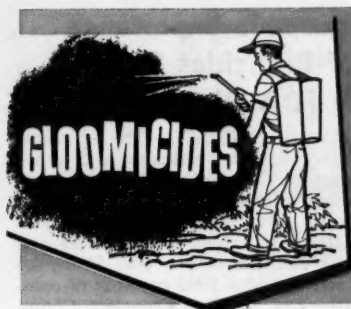
and wait for whatever signal or urge which compels them to emerge in vast numbers and head for trees, bushes, poles, or other upright objects. Here the insect sheds its nymphal skin and becomes an adult. They mate within a week after becoming adults, and in a few days, the females lay eggs. The adults live only five or six weeks, but their "song", an incessant whirring, droning monotone keeps going during each day of that time.

Damage Done by Cicadas

The egg-laying habits of the female can cause severe damage or even destruction to young, transplanted trees in nurseries and orchards, and some damage to older trees. The punctures in twigs and branches also offer shelter and feeding locations for scale insects, woolly aphids, and other pests. Some fruit is also lost from bearing trees that have been severely injured.

Control of Cicadas

This insect seems to prefer oak, apple, hickory, peach, and pear trees for egg-laying, so in the case of fruit-bearing trees care must be taken in the application of insecticides for control. Spraying should begin just as the cicadas begin to lay eggs, and repeated applications are usually needed to keep an infestation in check. Early morning sprayings are most effective.



Guest phoning down from his hotel room: "Is this the desk clerk?"

Clerk: "Well, what's eating you now?"

Guest: "That's what I'd like to know."

★

The major menaces on the highway today are drunken driving, thumbers for rides, and one-arm driving. To put it briefly—hick, hike, hug.

★

Husband: "Where is all the grocery money that I gave you?"

Wife: "Stand sideways and look in the mirror."

★

Said the little doughnut to the big layer cake: "If I had your dough, I wouldn't be hanging around this hole."

★

A couple of Scotsmen were walking along a road and one of them was jingling something in his pocket.

His pal asked: "Jock, you must have plenty of money in there."

"Oh no," said Jock, "that's my wife's false teeth. There's too much eatin' between meals in our house."

★

The county agricultural agent picked up the phone when it rang with a cheery "Hello."

A woman's voice answered: "Say, I have a flock of chickens, and I want to know if I put a rooster in with my hens how long will it be before I can expect fertile eggs."

"Just a minute," said the courteous farm advisor, as he picked up the pamphlet which might have the information.

"Thank you," replied the lady as she hung up.

★

"It appears to me," said the employment manager to the wife of a prospective employee, "that your husband has been fired from every job he ever held."

"That's right," admitted the wife loyally, "and it does prove one thing—Henry's no quitter."

★

The little girl was entertaining visitors until her mother was ready. One of the ladies remarked to the other with a significant look, "Not very p-r-e-t-t-y," spelling out the word.

"No," answered the child, "but awful s-m-a-r-t."

★

For several months Mr. Jones had been sitting around on the floor cackling like a chicken. The neighbors could stand it no longer, and asked Mrs. Jones if she couldn't do something. "Why don't you send him away for awhile? Perhaps he could be cured."

"Well, maybe," replied Mrs. Jones. "But we do need the eggs."

★

An elderly retired couple from a remote town was visiting New York for the first time. The sights seemed to interest the old gentleman more than his wife, who finally exclaimed, "John, the way you stare at these city women is something scandalous! A body'd think you'd never seen legs before."

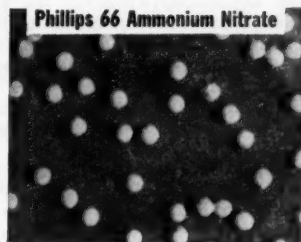
"Well," John mused, "that's what I was thinking myself."

PHILLIPS 66 ads like this appear regularly in **CAPPER'S FARMER, PROGRESSIVE FARMER, FARM JOURNAL, FARMER-STOCKMAN** and **FARM and RANCH . . .** part of a continuing program to help dealers sell more mixed fertilizers and **PHILLIPS 66 AMMONIUM NITRATE.**



**See the Difference
that Makes
the Difference**

Phillips 66 Ammonium Nitrate



Ordinary Ammonium Nitrate



Both products shown 2 times actual size

Phillips new and different electronically-controlled process and polyethylene-lined bags insure that you get round, hard, dry and uniform prills that stay that way in storage and during application.

Profitable farm practices can begin in your fertilizer dealer's office. He can help you plan a balanced fertilizer program that will yield maximum profits from your soil.

Your fertilizer dealer, good source of crop profit information

Your Phillips 66 Ammonium Nitrate dealer can be your party line to increased crop profits. Why? Because he is in a position to know a great deal about the best local farming practices. Many times he knows about farmers who live miles from you who have had success with a new approach to fertilization that could also work for you.

Your fertilizer dealer works with your county agent, the soil conservation service and vo-ag

teachers to keep informed on new farming developments. And every day he meets many leading local farmers who tell him about their own practical experiences.

Talk to your Phillips 66 Ammonium Nitrate dealer today. Let him help you plan a balanced fertilizer program. He can show you how to increase yields and profits using his mixed grade fertilizers and the supplemental nitrogen available in high quality Phillips 66 Ammonium Nitrate.

"A Good Name to Grow By"



PHILLIPS PETROLEUM COMPANY. Sales Offices: Amarillo, Tex.—First Nat'l Bank Bldg. • Atlanta, Ga.—1428 West Peachtree Street, Station "C" P. O. Box 7313 • Bartlesville, Okla.—Adams Bldg. • Chicago, Ill.—7 South Dearborn St. • Denver, Colo.—1375 Kearney St. • Des Moines, Iowa—6th Floor, Hubbell Bldg. • Houston, Tex.—6910 Fannin Street • Indianapolis, Ind.—3839 Meadows Drive • Kansas City, Mo.—201 E. Armour Blvd. • Minneapolis, Minn.—215 So. 11th St. • New York, N. Y.—80 Broadway • Omaha, Neb.—3212 Dodge St. • Pasadena, Calif.—317 North Lake Ave. • Raleigh, N. C.—401 Oberlin Road • Salt Lake City, Utah—68 South Main • Spokane, Wash.—521 East Sprague • St. Louis, Mo.—4251 Lindell Blvd. • Tampa, Fla.—3737 Neptune St. • Tulsa, Okla.—1708 Utica Square • Wichita, Kan.—501 KFH Building.

Screwworms Still Possible Threat in Florida, Says USDA

WASHINGTON—Screwworm flies captured in traps in Florida this spring indicate a limited native screwworm population may still exist in the southeast, the U.S. Department of Agriculture reported.

Several hundred traps currently are being used by USDA's Agricultural Research Service and the Florida Livestock Board to double check the effectiveness of the cooperative effort to eradicate this livestock pest from southeastern U.S.

The last known animal wound infestation that could be attributed to screwworms occurred on Feb. 19, 1959. Since then, however, fly traps in Florida have picked up three flies that are suspected of being native screwworm flies. Since the traps lure both native and the sterile flies being used in the eradication effort, it is difficult positively to identify trapped specimens as to their origin.

At this advanced stage of the eradication campaign, final success depends more than ever on how thoroughly livestock producers of the southeast search for and report infestations, according to Florida eradication leaders Dr. D. L. Williams of USDA and Dr. M. E. Meadows of the Florida Livestock Board. It is necessary for these farmers and ranchers to report suspected cases, and to furnish specimens of larvae and eggs taken from wounds to the eradication headquarters in Sebring, Fla. Although 40 to 50 samples of larvae and eggs are received weekly for examination at the Sebring laboratory, this number is considered insufficient for a good sampling of the area.

The eradication effort is unique in the history of cooperative pest control. Millions of screwworm flies are reared in a laboratory at Sebring and then exposed to radioactive cobalt which makes the flies sterile. Sterile male flies, released over the infested area, mate with native female flies which in turn produce only infertile eggs. Thus, the species is eventually wiped out. General release of sterile flies was begun in July, 1958.

BENTGRASS COMMISSION

SALEM, ORE.—Creation of a Highland bentgrass seed commission has been approved by the growers, announces Frank McKennon, Oregon agriculture director.

National Solutions Group Reports Meeting Plans

CHICAGO—The 1959 convention of the National Fertilizer Solutions Assn. will be held Nov. 8-10, at the Statler Hilton Hotel in St. Louis, Mo., it has been announced by Muriel F. Collie, executive secretary.

Featured at the opening session on Nov. 8, starting at 2 p.m., manufacturers of equipment and component parts will comprise a panel to present features of their products by means of actual demonstrations, mock-ups, charts and slides.

A question-and-answer period following the presentations will give the audience an opportunity to gain additional specific information. The annual conference rooms set-up for manufacturers will provide a more personalized follow-up for the discussion of individual problems and requirements. It is anticipated that a minimum of twenty manufacturers will participate in this exciting addition to the annual convention program.

Other sessions of the convention will feature talks on "Why Are You in Business?" by a guest speaker; "Solutions and Suspensions" by representatives of companies which have been making advances in this field; "These Are the Facts," a discussion of the situation today and five years from today with respect to nitrogen, phosphates and potash, and a "Town Hall Meeting" on the subject of "What's Bothering You?" for the exchange of information and thinking on specific problems of the industry, for which everyone in the industry will be requested to submit problems and questions in the areas of raw material supply, manufacturing processes, marketing methods, selling, storage, etc. Invitations are being sent to members in the corn belt, the cotton belt, the west coast and other areas of special interest in the field to participate as members of a panel to make brief presentations on the primary subject, after which the discussion will be open to all who are in attendance. An expert in the field of sales and sales promotion is an added feature on the program.

As this is the annual meeting of the association, new directors and officers will be elected and presented. For the second year, there will be the presentation of the annual award to the "Man of the Year" for 1959.

On the social side, arrangements have been made for the entire group to attend a performance on the Show Boat, permanently docked at St. Louis. The usual annual banquet will conclude the convention with entertainment and general conviviality.



B. E. Brown

J. D. McMurray

Agrico Forms New Divisions; Sales Managers Named

NEW YORK—Agrico's expansion and reorganization program was furthered when two additional regional sales divisions were established.

The new midwest sales division comprises Agrico sales offices at Cairo, Cincinnati, Cleveland and Washington C. H., Ohio; London, Ky.; and Detroit and Saginaw, Mich. J. D. McMurray, former assistant sales manager in New York, has been named midwest division manager. He will be located in Cleveland.

The former Knoxville division becomes the south central sales division, including Agrico's sales offices at Knoxville, Johnson City and Nashville, Tenn.; Montgomery, Ala.; and Pensacola, Fla. B. E. Brown, former Knoxville division manager, becomes south central division manager. He will continue to make his headquarters in Knoxville, Tenn.

Fire Ant Bill Loses in Louisiana

BATON ROUGE, LA.—The Louisiana state Senate killed a bill authored by an administration leader that would permit filing of suits by persons who suffered damages as a result of the fire ant eradication program.

The bill would have authorized filing of suits against the state agriculture department by 30-odd persons.

The Senate had previously turned down the bill, after Senate floor leader had questioned some provisions of the measure.

The Senate was asked to approve the bill on reconsideration but was turned down 17 to 12, with a majority vote of 20 required for its passage.

The Senate turned down the bill despite a proposed amendment that would have deleted a provision that the suits could be settled out of court by negotiation.

The bill would have authorized filing of suits by persons specified, who allegedly suffered damages to livestock or other property, as a result of agriculture department's program for eradicating fire ants by use of poison, usually sprayed from planes.

A state agency cannot be sued without consent of the state legislature.

Pacific Entomologist Branch To Meet in Sacramento

DAVIS, CAL.—The Pacific Branch of the Entomological Society of America will meet in Sacramento this year, June 23-25.

More than 100 speakers will present papers during the 43rd annual meeting of the group, to be held at the El Dorado Hotel, said Leslie M. Smith, professor of entomology at the University of California, Davis, and chairman of the Pacific Branch.

Entomologists from colleges and universities, government agencies, and industry will take part in the meeting. The program also will include an insect photographic salon on June 23 and a banquet on the evening of June 24.

There will be a special program for women.

Program chairman for the meeting is Francis M. Summers, associate professor of entomology at Davis.

Economic Importance Of Pesticides Stressed By FDA District Head

SAN FRANCISCO—The economic importance of pesticides and other agricultural chemicals to agriculture generally and the food industry cannot be over emphasized, McKay McKinnon, Jr., chief of the Food and Drug Administration, San Francisco District, told a joint meeting of committees of the San Francisco Chamber of Commerce recently.

"But the harmful potentialities of these products must never be overlooked nor ignored," he told members of the chemical industries section and the agricultural committee at a luncheon meeting in the Fairmont Hotel. "The grower who carefully follows the regulations imposed by the Food and Drug Administration or divisions of the U.S. Department of Agriculture is faithfully meeting his obligations and heavy responsibilities."

To ignore the regulations and safeguards is to risk doing more harm than the pesticides save in eliminating harmful insects, Mr. McKinnon indicated.

He traced a history of legislation controlling spraying procedures and residue tolerances, which began in Congress in 1915, through to the Miller Amendment.

"Where does the grower stand under the new law?" Mr. McKinnon asked.

"Growers must understand that it is not safe for them to experiment with new pesticides on crops. They should use the materials according to label directions—on the crops specified, in the amounts specified, and at the times specified," he advised.

"But the need for ordinary prudence in the use of pesticides should not alarm the consuming public or the growers. When a tolerance is established by the federal government," he said, "it means four things: crops should bear no more than the tolerance level of residue; the pesticide can be employed usefully in agriculture; residues up to the tolerance level are safe; and when the pesticide is used properly it will leave residues that are within the permitted level."

"The food and drug administration tries to keep up to date on all new developments in the industry, and during the growing season inspectors in the growing areas keep in touch with state authorities and growers to determine what sprays are being used and how."

"During the shipping season samples are picked up for inspection of spray residues, and when we go into a growing area to make investigations we go openly."

Mr. McKinnon praised Charles H. Kinsley, the regional coordinator of the California State Department of Agriculture, present at the meeting for the work his office was doing in control in the state.

Co-chairman of the meeting was Phillip H. Williams, vice president of the California Spray-Chemical Corp., Richmond, and chairman of the chemical industries section. Carl L. Garrison, vice chairman of the agricultural committee, presided.

Further joint industry meetings are being contemplated by the two groups.

PRESENTS MOVIE

WHITE SULPHUR SPRINGS, W.VA.—E. I. du Pont de Nemours & Co., Inc., presented its premier showing of a new sound and color movie, "Greener Pastures" to representatives of the press during the NPFI convention here June 15. The 12-minute film, made chiefly in the Midwest and Mid-Atlantic states, compares old farming methods with those of today with soil testing and fertilization. Francis M. Jorlin, sales manager for DuPont's nitrogen products section, presided at the showing.



3 or 2?
Diamond's six-pound killers give you the answer!

LINE RIDER herbicides are now available in SIX-POUND and equivalent low-volatile emulsifiable and oil soluble concentrates. Two gallons of these six-pound formulations contain as much acid equivalent as three gallons of four-pound concentrates.

You save on freight. You save on truck space. You save on storage. You save on handling and field application. All of these add up to savings in money.

Write for details. Diamond Alkali Company, 300 Union Commerce Building, Cleveland 14, Ohio.



Diamond Chemicals



Eugene Butler



Bob Christianson

Editors Honored at NPFI Convention

WHITE SULPHUR SPRINGS, W.VA.—Eugene Butler, editor-in-chief of the *Progressive Farmer*, Dallas, Texas, and Bob Christianson, editor of the *Arkansas Farmer*, Little Rock, Ark., were presented awards for "superior journalistic contributions toward the building of the soils of our nation" by the National Plant Food Institute.

Mr. Butler and Mr. Christianson were winners in NPFI's nationwide "Soil Builders Award for Editors" contest in a field of 29 magazine entries.

Dr. Russell Coleman, executive vice president of NPFI, presented the awards as a feature of the organization's fourth annual convention at the Greenbrier.

Judges for the contest were five nationally-known leaders in the fields of agriculture and business. They were: Luther Hardin, president, National Vocational Agricultural Teachers' Assn., Inc., Searcy, Ark.; Roger Fleming, secretary-treasurer, American Farm Bureau Federation, Washington, D.C.; Nolen J. Fuqua, past president, the National Association of Soil Conservation Districts, Duncan, Okla.; Orville Walker, president, National Association County Agricultural Agents, Kalkaska, Mich., and Herschel D. Newsom, master, the National Grange, Washington, D.C.

Scrolls signed by the national judges were awarded to Mr. Butler, representing the winner among magazines of more than 300,000 circulation and to Mr. Christianson, representing the winner among magazines of less than 300,000 circulation.

Features judged in the contest included stories, editorials, illustrations, and combinations of the three categories.

U.S. Rubber to Step Up MH-30 Education Program

NEW YORK—United States Rubber Co. has announced it will step-up its program to instruct tobacco growers on correct use of maleic hydrazide, or MH-30, its chemical that stops growth of suckers on tobacco plants.

"Recent debate on the North Carolina State Senate floor, and throughout the state, clearly demonstrated the need for a more intensified educational campaign on the use of MH-30 for sucker control," said Dr. H. Douglas Tate, manager of agricultural chemical research for the company's Naugatuck Chemical division.

"Our program will support the educational efforts of University extension workers, county agents and farm organizations," Dr. Tate said. Technical representatives of Naugatuck Chemical will hold meetings for growers at which use of the chemical would be explained.

"We also plan to ask other companies which use our basic chemical compound to formulate MH-30, and firms distributing MH-30, to cooperate in conducting these growers' meetings," Dr. Tate said.

Booklets stressing the proper use of the chemical, and the dangers associated with misuse, will be made available by Naugatuck Chemical, he said. The company also plans to continue its grants to support MH-30 research at various experiment stations, and to disseminate information resulting from this research to growers.

California Fertilizer Sales High During 1st Quarter

SACRAMENTO—Sale of fertilizing materials in California during the first three months of the year greatly exceeded sales last year for the same period, according to the State Department of Agriculture.

Figures compiled from tonnage license tax payments submitted by manufacturers show sales of 317,589 tons of commercial fertilizer during the first three months of 1959.

Robert Rollins, chief of the department's Bureau of Chemistry, said this is the largest tonnage ever reported for the first quarter of any year, and the total is up 25% more than the figure reported for the first three months of last year.

Comparing the tonnages for this year with those for last year, big gains were noticed in the tonnage of ammonia solutions, which more than doubled in volume; in liquid mixed

fertilizers, which increased two and a half times; in superphosphate, which approximately doubled, and in anhydrous ammonia, which increased 73%.

Liquid fertilizers of all kinds made up 33% of the entire tonnage for the three-month period, as compared with 21% of the total tonnage for the same period last year.

The total tonnage of agricultural minerals sold for the first three months of the year reached 315,055 tons, a figure which has been exceeded by only two previous quarters, according to the Bureau of Chemistry's records. This tonnage was up 52% over the tonnage reported for the three-month period last year. As always, agricultural gypsum was the most common material and made up 93% of the total. Mr. Rollins said the increased usage has been attributed in part to the excellent weather that prevailed during the early part of the year, enabling farmers to continue field work.

H. J. Stoll & Sons Named Oregon Agro Distributor

PORTLAND, ORE.—H. J. Stoll & Sons, Portland, was named exclusive distributor for the Agro line of garden supply and nursery products for Oregon and southwest Washington, according to Lee Fryer, Pacific Agro Co., Seattle.

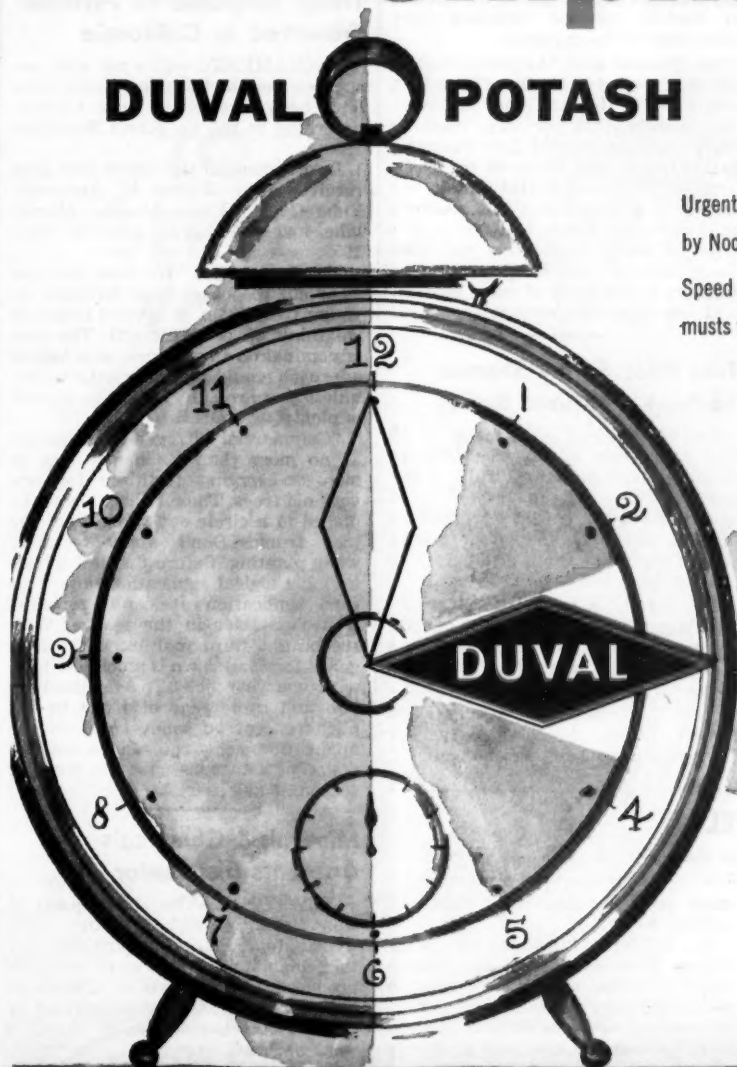
The joint program will include all of the Agro fertilizers and nursery formulations. It will also include Nitroform, FTE, the Tracin chelated plant foods, Ferry Morse lawn seeds, and other products of the Pacific Agro Co.

H. J. Stoll & Sons are launching a complete garden and nursery supply program through their own efforts, and with the technical and commercial help of Pacific Agro.

Dick Holmboe is handling sales contacts and building of the dealer program for Stoll in the Portland trade area.

same day shipment

DUVAL POTASH



Urgent orders shipped same day if received by Noon or possibly mid-afternoon.

Speed of handling and quality are always musts with Duval and Ashcraft-Wilkinson Co.

High Grade
Muriate
of Potash...

DUVAL SULPHUR
&
POTASH COMPANY

Exclusive Distributors

ASHCRAFT-WILKINSON CO.

HOME OFFICE

ATLANTA, GEORGIA

Cable address: Ashcraft

Portland, Va. • Charleston, S. C. • Tampa, Fla. • Jackson, Miss. • Columbus, Ohio • Montgomery, Ala. • Des Moines, Iowa

New California Plant To Start Producing Nitrogen by September

SACRAMENTO—The new plant of Valley Nitrogen Producers, Inc., near Helm, Cal., is scheduled to begin producing nitrogen fertilizer by next September, according to Edward Cook, northern California representative of the farmer-owned cooperative.

The \$9,500,000 plant, when operating at full capacity will deliver daily 150 tons of anhydrous ammonia, 200 tons of sulphuric acid, 200 tons of sulphate of ammonia and 240 tons of ammonium phosphate.

The plant is situated on a natural gas pipeline where the gas will be combined with nitrogen from the air and water to produce pellets and mixed fertilizers. It is patterned after one in Mississippi which is reported producing well in excess of its rated capacity.

Cyanamid Dedicates Regional Distribution Facility in Portland

PORTLAND, ORE.—Confidence in the continuing industrial growth of Portland and the Pacific Northwest was expressed by officials of American Cyanamid Co. at ceremonies dedicating the firm's new \$350,000 regional distribution facility here.

Cyanamid's increased volume of marketing and the potential growth of the region made necessary the expansion to new facilities, according to K. H. Tate, office manager of the new center at 3145 N.W. Yeon Ave., in Davis Industries Park.

The new building consolidates regional sales and distributing activities for several American Cyanamid divisions and subsidiaries, including Lederle laboratories, organic chemicals, agricultural chemicals, industrial chemicals, pigments, plastics and resins, surgical products and the Formica Corp.

Division executives who cited the region's expanding economy and potential for continued rapid growth included O. M. Cornell, regional manager for the industrial chemicals division; W. Ward Smith, regional manager for Lederle laboratories, and W. C. Marshall, regional manager for the organic chemicals division.

The new facility was constructed by Dan Davis & Co. for lease to Cyanamid. The \$350,000 distribution center includes 7,000 sq. ft. of air-conditioned offices and 19,700 sq. ft. of warehouse space on a landscaped site.

Two-Alarm Fire

SALT LAKE CITY, UTAH—A two-alarm fire of undetermined origin recently destroyed Acme Byproduct Co.'s plant here. The firm deals in fertilizers and building materials.

WOODEN FERTILIZER

Leftover materials at the St. Helens mill of Pope & Talbot, Inc., are finding their way into a new Oregon wood product—fertilizer. In a new pilot plant operation recently started at the mill, the firm is packaging 60% ground bark and 40% peat moss mixed with ammonium sulphate and iron sulphate.

Mississippi Engineer Tests Duster Service

STATE COLLEGE, MISS.—A new design of airplane dust distributors which will greatly reduce the 40 h.p. drag caused by conventional equipment now in use, is a project under way at Mississippi Agricultural Experiment Station.

Fred L. Shuman, agricultural engineer, expects the new system, when perfected, to have the following advantages: Low power requirement, increased pay load, more uniform distribution, increased swath width, reduction of drift, instantaneous full-flow rate, and faster application rate.

The project is considered new for dust distribution equipment. The design is a blower-driven positive-energy dust distributing system, as compared to the ram-air venturi spreader. Tests have shown that greater energy can be given in material passing through the distributor by increasing the velocity of the air flowing through the system so that greater control can be exercised over placement of the material.

Mr. Shuman said, "Airplanes dusted, sprayed, seeded or fertilized 60 million crop acres in the U.S. alone last year. Yet, despite its importance, research on the aerial phases of farm mechanization has lagged. Many of the problems of 30 years ago still remain unsolved. It is hoped that this research at Mississippi State University will improve aerial application and that these benefits will be passed on to farmers in the form of more efficient and less expensive service."

Test Pilot Series Started To Seek Fertilizer Needs

LACONIA, N.H.—A series of 18 test plots being run on the farm of Arthur Harris in Gilford, N.H., is expected to provide the answer as to just how much nitrogen fertilizer the farmers in the Belknap County area should apply to various grass crops to get the best production.

Mr. Harris is a part-time farmer, handling a beef animal herd strictly from the farm roughage acres and without costly grain bills.

The tests are being conducted by Horace C. Ballard, county agent, and Robert Lucey, University of New Hampshire extension agronomist.

MCA Board Members Elected; Award Made

WHITE SULPHUR SPRINGS, W. VA.—John T. Connor, president of Merck & Co., Inc., Rahway, N.J., was elected chairman of the board of directors of the Manufacturing Chemists' Assn. at its 87th annual meeting here.

He succeeds Harry B. McClure, vice president of Union Carbide Corp., New York.

Dr. David H. Dawson, vice president, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., succeeds Mr. Connor as chairman of the executive committee.

Gen. John E. Hull, USA (Ret.), full-time president and a director, was re-elected.

Elected as vice presidents were Thomas S. Nichols, chairman of the board of Olin Mathieson Chemical Corp., New York, and R. W. Thomas, vice president of Phillips Petroleum Co., Bartlesville, Okla. Maurice F. Crass, Jr., Washington, was re-elected as full-time secretary-treasurer.

In other business, Spencer Chemical Co. of Kansas City, Mo., and the J. T. Baker Chemical Co. of Phillipsburg, N.J., received the Lamont du Pont Safety Awards made annually by the MCA.

Winning companies are those which show the greatest percentage reduction in average disabling injury frequency rate for the past two year period compared with the rate for the immediately preceding three years.

Trees' Response to Fertilizer Observed in California

SACRAMENTO—Clear cut responses from fertilizer on young trees have been received in Yuba County, according to the California Fertilizer Assn.

Information to this effect has been received from Walter M. Anderson, Yuba County Farm Advisor, Marysville, in his Orchard Letter for May, 1959.

The letter says: "We have received clear cut responses from fertilizer on young trees, even on several locations we think of as fertile soil. The cost is nominal on small trees, so a logical approach would be to apply fertilizer, unless you are sure your tree growth is plenty vigorous."

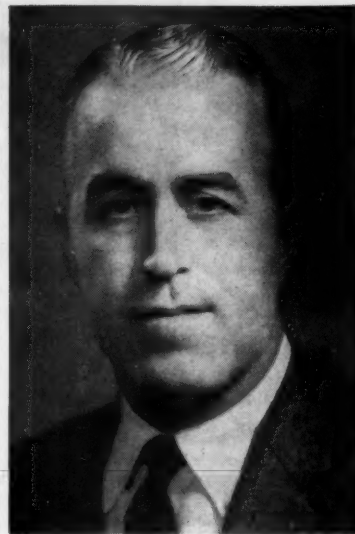
"Commercial nitrogen is suggested at no more than ¼ lb. per tree of nitrogen-carrying fertilizer for one year old trees. The fertilizer should be placed in a circle out 15 in. from the tree trunk. Don't apply fertilizer when planting. Before the first irrigation is a logical application time. This same application rate can be repeated if needed later in the season. With second and third year trees, the danger of fertilizer burn is much less than with one year olds. The fertilizer on two and three year olds can be applied (except on sandy soils) in one application, using rates up to one-half pound of actual nitrogen per tree per season, if necessary."

Minerals & Chemicals Appoints Distributor

NEW YORK—The appointment of Van Horn, Metz & Co., Inc., New Kensington, Pa., as distributor for the complete line of inert minerals produced by Minerals & Chemicals Corp. of America was announced by O. E. Hempel, manager of chemical sales at M&C.

The new distributor will maintain warehouse stocks of M&C products at the suburban Pittsburgh location to serve customers in western Pennsylvania and northern West Virginia.

In addition to its new western Pennsylvania office, Van Horn & Metz also distributes M&C products from its main office in Conshohocken, Pa., and from other branch offices and warehouses in Baltimore, Md., and Richmond, Va. The new branch, which will be managed by John R. Eckley, is located at Coxcomb Hill Road, RD No. 2, New Kensington, Pa.



B. E. Thorne

SALES MANAGER—B. E. Thorne has been named Agrico sales manager for New England, according to an announcement by W. J. Turbeville, Jr., vice president in charge of fertilizer sales for the American Agricultural Chemical Co., manufacturer of Agrico fertilizers. Mr. Thorne will continue to be located at North Weymouth, Mass., where he has been assistant manager since 1955. He replaces J. J. Graham, who recently transferred to the company's general credit office in New York.

NPFI Announces Three New Members

WHITE SULPHUR SPRINGS, W. VA.—The National Plant Food Institute announced the addition of three new members at its convention here, June 14-17.

The new members are: The Best Fertilizer Co., Lathrop, Cal.; Bradford Fertilizer & Chemical Co., Aurora, Ont., and Mid-South Chemical Co., Memphis, Tenn.

Allied Chemical Adds Five Staff Members

NEW YORK—Allied Chemical's general chemical division has increased its agricultural chemicals sales staff with the addition of five new men assigned as resident salesmen in various parts of the country.

The men will primarily be responsible for the introduction of new Allied Chemical products.

Walter P. Kerr, entomologist with B.S. and M.S. degrees from Texas A&M College, will be assigned to the St. Louis office and will serve as a resident representative in Omaha, Neb.

John Magliocco, chemist with a B.S. degree from Rhode Island University, will be assigned to the New York metropolitan sales office and will cover Long Island, northern New Jersey and eastern New York.

William D. Thomas, dairy production specialist with a B.S. degree from Oklahoma A&M College, assigned to Shreveport, La. to serve northern and central Louisiana and northeast Texas.

Rogna M. Burnett, farm management specialist with a B.S. degree from Arkansas University, assigned to the Houston, Texas office, serving all Texas except the northeastern portion.

F. H. Stillwagen, agronomist with a B.S. degree from the University of Maryland, assigned to South Bend, Ind. and covering Indiana and Kentucky.

AGRONOMY FIELD DAY

LAFAYETTE, IND.—Small grains—wheat, oats and barley—will be featured at Purdue University's annual Agronomy Field Day, June 25, at the University's agronomy farm, seven miles northwest of Lafayette on U.S. 52.

PANEL

(Continued from page 1)

cotton and realize a profit of \$46.80 an acre," he said.

Dr. Reed brought out similar figures on hay and pastures, wheat, and other crops to make his point that fertilization does pay off to the farmer who makes use of it.

Dr. R. J. Hildreth, research coordinator for west Texas, Texas Agricultural Experiment Station, Lubbock, said that the weather barrier looms much larger to the farmer than the facts justify, emphasizing that "... studies in the more hazardous weather areas of Texas show that many farmers may have underestimated their chances of fertilizer profit.

"The farmer's odds in favor of profits from fertilizer use appear to be greater than many think," he said, adding that "fertilizing in the future will be done on the basis of much

more precise calculations than are possible today."

Dr. Hildreth, speaking on "Minimizing Weather Risks with Fertilizer," said that research information needed includes weather information; information as to the amount of moisture necessary to use most profitably various levels of fertilizer; and how much moisture is in the ground at the time the fertilizer is applied.

"Once we know (a) the weather probability, (b) most profitable rates of fertilizer at various moisture levels, and (c) how much moisture there is available at the beginning of the season, calculations should give a fairly refined estimate of the odds in favor of profits from various levels of fertilizer use," he said. "The farmer's own situation and inclinations would then determine which odds he would choose."

FORMULA

(Continued from page 1)

"the formula-produced estimate was within 1.6% of the actual consumption."

"The study also has been designed to predict demand for the different major agricultural regions of the country. In its present stage of development the equation will not necessarily reflect all the factors that influence fertilizer consumption, particularly in an unusual year." He indicated, however that "with a proper understanding of the limitations of the method developed, it can be helpful to the fertilizer industry in planning its operations. The study is being continued in an effort to further refine the method."

Dr. King said that relatively simple equations have provided good estimates of fertilizer use at the national and regional levels.

While acknowledging the problem of securing sufficient basic data, Dr. King said he was of the opinion that reliable results can be produced with the data available.

Some of the factors to be considered in making accurate predictions, he said, include the following 10 points:

1. The total acreage planted by farmers in a particular year.
2. The acreage of major crops grown.
3. The economic position of farmers.
4. The availability of fertilizer.
5. Prices paid for fertilizer in relation to other inputs which farmers must purchase.
6. Recommended levels of fertilization.
7. Farmers' knowledge and attitude toward the use of fertilizer.
8. Technological changes such as the rapid growth in supplemental irrigation.
9. Weather conditions.
10. Promotion and advertising efforts by the fertilizer industry. And finally, but not least important, governmental activities influencing agricultural output.

"Since it was not possible to use all of these factors in our estimating equation we selected those that seemed to be most important," he went on.

The following indicators were used:

1. The level of plant food consumption in the previous year.
2. Changes in the acreage of major crops.
3. Changes in the price of fertilizer.
4. Changes in cash sales of crops in the previous year.

"The use of these indicators made it possible to develop estimates of consumption that follow very closely the actual use of primary plant nutrients in the U.S.," he said.

"It should be pointed out that our method of estimation, or anyone else's for that matter, is likely to miss in certain years. One example that might be mentioned is the 1955-56 fiscal year when we did not predict the down-turn in fertilizer consumption. Perhaps this is partly explained by the fact that changes in government programs were not built into our mathematical equation. However, many in the industry would have recognized the need for modifying mathematical projections on the basis of government programs."

In conclusion, Dr. King reported that relatively simple models can provide good estimates of fertilizer use at the national level and at regional levels. "The information needed to make use of our estimating equations is readily available and it is believed that the results will serve as helpful guides to management in the fertilizer industry. The payoff, of course, will be in how well these predictions stand up in future years."

"Over the longer pull, we believe that farmers will continue to recognize that fertilizer is a best buy. If we look at the history of changes in plant nutrient consumption and gross farm income for the years since 1910 we find that the two are highly correlated. This is not an accidental correlation, because it can be proved conclusively that higher levels of fertilizer use have been responsible for an important part of the increase in farm incomes in recent years. During this period the prices paid by farmers for fertilizer have risen only 50% while the prices paid by farmers are now three times what they were in the base period. This can be restated very simply by pointing out that, in terms of all prices paid by farmers,

fertilizer is now one-half as costly as it was in the base years."

In commenting on the study, Dr. M. S. Williams, chief agricultural economist for NPFI, said that "the Institute is requesting assistance from market research personnel of the member companies in an effort to further refine the technique outlined by Dr. King."

Raymond Appointment

MIDDLETOWN, OHIO—Raymond Bag Corp. has appointed Howard Lundeen quality control supervisor in charge of all quality control operations in the firm's plants at Middletown, Ohio, and at Richmond, Va.

Mr. Lundeen was previously with the Pillsbury Co. at Hamilton, Ohio, where he was process and control chief for more than three years. Prior to that he spent five years with the Jones & Laughlin Steel Corp.

EUROPEAN CONVENTION

AMBLER, PA.—Amchem Products, Inc., Ambler, has completed a five-day European Convention held at the Imperial Hotel, Copenhagen, Denmark, May 31 through June 4. More than 100 foreign licensees and their wives were in attendance representing Austria, Belgium, Denmark, England, Finland, France, Germany, Greece, Holland, India, Israel, Italy, Norway, South Africa, Spain, Sweden and Switzerland. The program included discussions on new agricultural chemicals.

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A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Midwestern states.

Alabama Survey Reveals Farmers in Favor Of Efforts to Control Imported Fire Ant

AT THE RISK of becoming a sort of modern-day Don Quixote seeking windmills to overturn and wrongs to right, we should like to point out some additional facts in the controversial battle over fire ant control in some of the Southern states.

Despite many widely-published articles to the contrary, a great majority of Alabama farmers have indicated their belief that the fire ant eradication program should be continued. A survey run by the Alabama Farm Bureau among 1,020 farmers in that state who had participated in the control program, brought a 99% favorable reply when the growers were asked whether the fire ant eradication project should be continued.

Farmers reporting in the poll own 318,093 acres, or 92% of the land on which cooperative spray programs have been conducted. The survey was made in April of this year.

Among the questions asked by the Farm Bureau were:

Do you believe the imported fire ant is detrimental to your farming operations?

Over 97% replied affirmatively.

Did the treatment clear up the infestation of fire ants on your property?

Ninety-five percent answered "yes."

Was there any damage or injury whatsoever to your domestic animals?

To this one, 98% answered "no."

In addition, 97% of those queried reported that they had neither observed nor heard of appreciable damage to wildlife resulting from the fire ant program.

Alabama Farm Bureau reports that many of the farmers filled in a "remarks" column expressing their complete satisfaction with the program as it is being conducted.

The Farm Bureau instigated the survey after noting that "the fire ant program in the southeastern states has been considerably criticized by certain wildlife and conservation groups . . . (and) much of this controversy has centered in Alabama."

Over 346,900 acres have been treated in Alabama's fire ant program. Some 1.2 million acres have been treated in nine southeastern states.

W. O. Owen, supervisor in charge of plant pest control activities for the U.S. Department of Agriculture in Alabama, reports that demands for fire ant treatments in that state and other infested states "have been overwhelming."

Mr. Owen, in a statement to the Alabama Farm Bureau, said that all known infestations in 12 counties immediately north of Birmingham had been cleared up. He went on to say that no ants were found in Alabama's 14 northernmost counties. Farmers and urban landowners have signed up an additional 640,000 acres in that state. Further demands are being made for more programs which outdistance federal and state funds for this work.

This doesn't sound quite like "everyone" in Alabama is against the fire ant eradication program. In fact, it makes one wonder how the authors of articles criticizing the program can find only those opposed to the whole idea for interviews. There must be a very powerful dog-wagging tail somewhere about. Apparently a very small but vocal minority is making a great deal of

noise and giving the public the idea that control programs do more harm than good.

★ ★ ★

In recent comment on the fire ant program, we quoted from an editorial appearing in a South Carolina newspaper. Another editorial of similar nature has been brought to our attention. It appeared recently in the Temple (Texas) "Daily Telegram."

The editorial says:

"It has become the fashion for large numbers of otherwise rational conservationists and self-appointed protectors of wildlife to view with alarm the progress man has made in recent years in his unending battle for supremacy over the insects that ruled the world before he appeared on it, and have threatened whole civilizations ever since.

"In his large-scale use of modern high-powered pesticides, they charge, man is upsetting the 'balance of nature.' But one might well ask: 'What balance?' We do not believe there is or ever was such a thing. Rather, the way of nature has appeared to be a course of perennial unbalance. A 'balanced' nature would insure an unchanging, static world, incapable of geologic upheavals and mutations, or the evolution of species. Pterodactyls, no doubt, would still be flying over—not jets, for there would be no homo sapiens (and hence, we suppose, no arguments).

"In Exodus XI:15, we read of locusts 'that covered the face of the whole earth, so that the land was darkened; and they did eat every herb of the land, and all the fruit of the trees . . . and there remained not any green thing in the trees, or in the herbs of the field, through all the land of Egypt.'

"Somewhat later, just last summer, in fact, when another plague of locusts threatened 17 of our own western states, cooperative federal-state pest control programs treated 4,338,329 acres to check infestation before the invaders could 'eat every herb' on crop and range land. Much publicity has been given the nine-state eradication program that is gaining the upper hand over the imported fire ants that not only ravage the land but are killers of man and beast. But additionally there are some 20 other large-scale joint federal-state pesticide operations, some of which have been in progress 20 years or more.

"Even so, authorities estimate that food and fiber equivalent to the total production of over a million U.S. farm workers is lost to insects every year.

"As for the wildlife, repeated surveys fail to show serious loss of life, while the pesticide control programs are the best assurance of improved and continued cover for game. And selective chemicals used in lakes and streams to eliminate predatory, unwanted species, are improving both game and commercial fishing. An outstanding example of conservation-by-chemicals is the development of a method for control of the lamprey eel in the Great Lakes—after it had all but extinguished both the esteemed whitefish and the fishing industry, both of which should now come back.

"Thus, as our pesticide programs gain on the devouring enemy—in the air, on the ground and under the water—and as insect-borne diseases such as yellow fever, encephalitis, bubonic plague and malaria are brought under control, it would seem to us that man is at long last providing nature with some sort of balance—that gives him as well as the birds and beasts a better chance of survival."



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG

Editor

DONALD NETH

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MEETING MEMOS



June 23—National Joint Committee on Fertilizer Application, in conjunction with American Society of Agricultural Engineers, Cornell University, Ithaca, N.Y.

July 6—Soil Improvement Committee, Pacific Northwest Plant Food Assn., Winthrop Hotel, Tacoma, Wash.

July 15-16—Annual Fertilizer Conference, Cornell University, Ithaca, N.Y.

Jan. 6-8—14th Annual Meeting, Northeastern Weed Control Conference, Hotel New Yorker, New York City.

Meeting Memos listed above are being listed in this department this week for the first time.

June 23-25—Pacific Branch, Entomological Society of America, 43rd annual meeting, El Dorado Hotel, Sacramento, Cal. Dr. Leslie M. Smith, University of California, Davis, branch chairman.

June 27—Del-Mar-Va Peninsula Fertilizer Assn., Ocean City, Md.

June 29-30 Fertilizer Industry Conference, University of Illinois, Urbana, Ill.

June 29-30—Seventh Annual California Fertilizer Conference, University of California campus, Davis, Cal. J. H. Nelson and Earl R. Mog, co-chairmen.

July 1—Western Research and Education Committee, El Mirador Hotel, Sacramento, Cal.

July 7-9—Regional Fertilizer Conference, co-sponsored by the Pacific Northwest Plant Food Assn. and state colleges and universities in the area, Winthrop Hotel, Tacoma, Wash.

July 15-17—Southwestern Fertilizer & Grade Meeting, Galvez Hotel, Galveston, Texas.

July 29—Annual Kentucky Fertilizer Conference, Guilford Theater, University of Kentucky campus, Lexington, Ky.

July 31—Agronomy Field Day, University of California, Davis, Cal.

Aug. 3-7—Gordon Research Conference on biochemistry in agriculture, Kimball Union Academy, Meriden, N.H.

Aug. 12-13—Northeast Fertilizer Safety School, Cornell University, Ithaca, N.Y.

Aug. 18-19—Midwest Fertilizer Safety School, National Safety Council Headquarters, Chicago, Ill.

Aug. 18-19—Annual Alabama Fertilizer Conference, Alabama Polytechnic Institute, Auburn, Ala.

Aug. 18-22—Annual Convention of the Canadian Fertilizer Assn., Bigwin Inn, Lake of Bays, Ontario.

Aug. 26-28—Soil Conservation Society of America, 14th Annual Meeting, Rapid City, S.D.

Aug. 30-Sept. 3—American Institute of Biological Sciences annual meeting, Pennsylvania State University, University Park, Pa.

Sept. 24-25—Annual North-Eastern Fertilizer Conference, NFFI, Biltmore Hotel, New York, N.Y.

Sept. 30-Oct. 1—Fourth Southeastern Fertilizer Conference, Atlanta Biltmore Hotel, Atlanta, Ga.

Oct. 13-14—Western Agricultural Chemicals Assn., fall meeting, Villa Motel, San Mateo, Cal. O. O. Barnard, executive secretary.

Oct. 14-16—Pacific Northwest Plant Food Assn. Annual Convention, Chinook Hotel, Yakima, Wash.

Oct. 21-23—National Agricultural Chemicals Assn., 26th annual meeting, French Lick-Sheraton Hotel, French Lick, Ind. Lea S. Hitchner, executive secretary.

Oct. 27—Seventh Annual Grassland Farming Conference, Extension Service, Rutgers University College of Agriculture, New Brunswick, N.J.

Nov. 4-6—Fertilizer Industry Round Table, Mayflower Hotel, Washington, D.C. Dr. Vincent Sauchelli, National Plant Food Institute, chairman.

Nov. 8-10—National Fertilizer Solutions Assn., Annual Convention, Statler Hilton Hotel, St. Louis; Muriel F. Collie, 2217 Tribune Tower, Chicago 11, executive secretary.

Nov. 9-11—California Fertilizer Assn., 36th annual convention, Fairmont Hotel, San Francisco.

Nov. 16-20—National Aviation Trades Assn., 20th annual convention, New Orleans, La.

Dec. 7-10—Central Canada and North Central Weed Control Conferences, Royal Alexandra Hotel, Winnipeg, Manitoba, Can.

Dec. 9-11—International Crop Protection and Pest Control Exhibition, Seymour Hall, St. Marylebone, London, England.

CALENDAR FOR 1959-60

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W. H. Dillon to Head Minneapolis Area Sales for Bemis

ST. LOUIS—Bemis Bro. Bag Co. has announced the appointment of W. H. Dillon as sales manager of its Minneapolis sales division effective immediately. Mr. Dillon had been serving as plant merchandiser at the company's Houston bag factory during the past three years.

Mr. Dillon's entire tenure of service with Bemis, 12 years, has been at the Houston plant where he began as a senior accounting clerk. In 1949, he was transferred to the Houston sales division and subsequently was appointed plant merchandiser.

Mr. Dillon will be responsible for management of sales in a territory which includes Wisconsin, Minnesota, North Dakota and portions of South Dakota, Iowa and Michigan. The plant in which the sales division is quartered manufactures multiwall, cotton, open-mesh, burlap and small paper bags.

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